

## Report of Test

**LLIA001912-001**

Indoor Distribution Photometry Test Report

Catalog Number: NEXUS 23" x 5" Drum Pendant

Suspended mounted, formed white painted steel housing, diffuse white plastic perimeter with diffuse white plastic bottom enclosure, frosted side down.

204 white LEDs on Q-Tran 3500K 5W/FT Light Strips. 202 LEDs visible.

One ERP VZM060W-24 LED driver



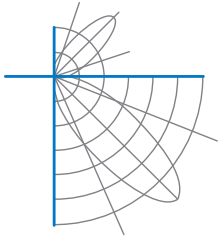
Prepared For:  
Lumetta, Inc  
33 Minnesota Avenue  
Warwick, RI 02888, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	1755.0 Lumens
Input Current	0.2650 A	Total Efficacy	56.3 Lm/W
Input Power	31.16 W	Downward Flux	1581.1 Lumens
Frequency	60.00 Hz	Downward Flux	90.1 % of Total
Power Factor	0.980		
Current THD	12.9 %		

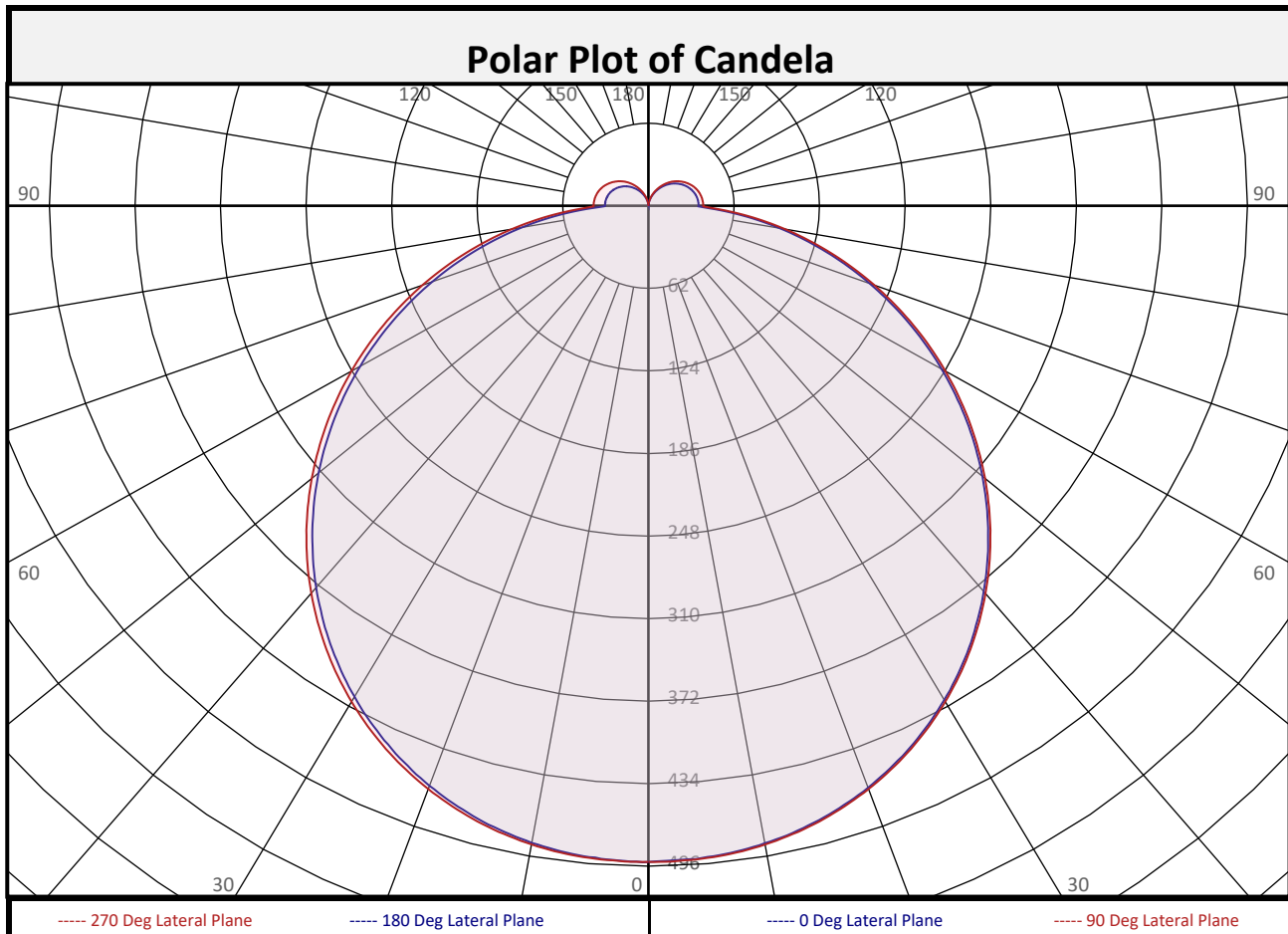
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

Test date: 10/20/2022  
Report date: 10/20/2022

Signed: \_\_\_\_\_

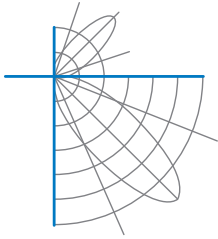


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### Zonal Flux Summary

Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total	Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	46.8	2.7%	90-100	39.9	2.3%	0-20	181.7	10.4%
10-20	134.9	7.7%	100-110	37.4	2.1%	0-30	388.7	22.1%
20-30	206.9	11.8%	110-120	32.6	1.9%	0-40	642.1	36.6%
30-40	253.4	14.4%	120-130	26.0	1.5%	0-60	1163	66.3%
40-50	268.8	15.3%	130-140	18.7	1.1%	0-80	1512	86.1%
50-60	252.0	14.4%	140-150	11.5	0.7%	10-90	1534	87.4%
60-70	206.9	11.8%	150-160	5.7	0.3%	20-90	729.2	41.5%
70-80	141.8	8.1%	160-170	1.8	0.1%	40-90	939.0	53.5%
80-90	69.5	4.0%	170-180	0.2	0.0%	60-90	418.2	23.8%
0-90	1581	90.1%	90-180	173.9	9.9%	0-180	1755	100.0%



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#### Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	0	493	493	493	493	493	493	493	493	493
	2.5	492	492	492	492	493	493	492	492	492
	5	491	491	491	492	492	491	491	491	491
	7.5	489	489	489	490	490	490	490	489	489
	10	486	486	487	487	487	487	487	486	486
	12.5	483	483	483	483	483	483	483	482	482
	15	478	478	478	478	479	478	478	477	477
	17.5	472	472	472	473	473	473	472	471	471
	20	465	465	465	466	466	466	465	464	464
	22.5	457	457	458	458	458	458	458	456	455
	25	449	448	449	450	450	450	449	447	446
	27.5	439	439	439	440	441	440	440	438	437
	30	429	428	429	430	430	430	429	427	426
	32.5	417	417	417	419	419	418	418	416	414
	35	405	404	405	406	407	407	405	403	402
	37.5	392	391	392	393	394	394	392	390	388
	40	378	377	378	379	380	380	379	376	374
	42.5	363	363	363	365	365	365	364	361	360
	45	348	347	348	350	350	350	349	346	344
	47.5	332	331	332	334	335	334	333	330	328
50	316	315	316	318	318	318	317	313	312	
52.5	299	298	299	301	301	301	300	296	295	
55	282	280	281	283	284	284	283	279	277	
57.5	264	263	264	266	266	267	265	261	260	
60	246	244	246	248	249	248	247	243	241	
62.5	227	226	227	229	230	230	229	224	223	
65	208	207	208	211	212	212	210	206	204	
67.5	190	188	190	192	193	193	191	187	185	
70	171	170	171	173	174	174	173	168	167	
72.5	152	151	152	154	156	156	154	150	148	
75	133	132	133	136	137	137	136	131	129	
77.5	115	114	115	117	119	119	117	113	111	
80	97	95	97	99	101	101	99	95	93	
82.5	79	78	79	82	83	83	82	77	75	
85	62	60	62	64	66	66	64	60	58	
87.5	45	44	46	48	49	50	48	43	42	
90	36	35	36	38	40	40	38	33	31	

16 lateral half-planes of data were acquired, 22.5 degree increments shown.

**North America (issuing laboratory)**

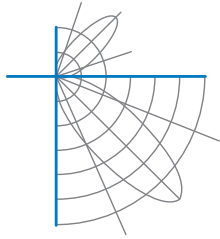
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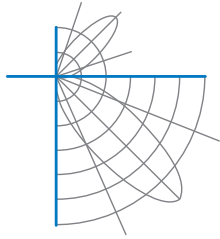
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Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	36	35	36	38	40	40	38	33	31
	92.5	36	35	36	38	40	40	38	33	31
	95	36	35	36	38	40	40	38	33	31
	97.5	36	35	36	38	39	39	38	33	31
	100	36	34	36	38	39	39	37	33	31
	102.5	35	34	35	37	39	39	37	32	31
	105	35	34	35	37	38	38	36	32	30
	107.5	34	33	34	37	38	38	36	31	30
	110	34	33	34	36	37	37	35	31	29
	112.5	33	32	33	35	36	36	35	30	29
	115	32	31	32	34	35	36	34	30	28
	117.5	31	30	32	34	34	35	33	29	27
	120	31	29	31	33	33	34	32	28	27
	122.5	30	28	30	32	32	33	31	27	26
	125	28	27	29	30	31	31	30	26	25
	127.5	27	26	27	29	30	30	29	25	24
	130	26	25	26	28	29	29	28	24	23
	132.5	25	24	25	27	27	28	26	23	22
	135	24	23	24	25	26	26	25	22	21
	137.5	22	21	22	24	25	25	24	21	19
140	21	20	21	22	23	23	22	19	18	
142.5	19	19	19	21	21	22	21	18	17	
145	18	17	18	19	20	20	19	17	16	
147.5	16	16	16	18	18	18	17	15	14	
150	15	14	15	16	16	17	16	14	13	
152.5	13	13	13	14	15	15	14	12	12	
155	12	11	12	13	13	13	13	11	10	
157.5	10	10	10	11	11	12	11	10	9	
160	9	8	9	9	10	10	9	8	8	
162.5	7	7	7	8	8	8	8	7	6	
165	6	6	6	6	7	7	7	6	5	
167.5	5	4	5	5	5	5	5	5	4	
170	3	3	3	4	4	4	4	4	3	
172.5	2	2	2	3	3	3	3	3	2	
175	2	1	1	2	2	2	2	2	1	
177.5	1	1	1	1	1	1	1	1	1	
180	0	0	0	0	0	0	0	0	0	

16 lateral half-planes of data were acquired, 22.5 degree increments shown.



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Coefficients of Utilization/Room 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	70	50	30	10	70	50	30	10	70	50	30	10	0
RCR																					
0	117	117	117	117	113	113	113	113	106	106	106	106	99	99	99	99	93	93	93	93	90
1	105	100	95	91	101	97	92	89	91	87	84	84	85	82	80	80	80	78	76	76	73
2	95	86	79	73	92	84	77	71	78	73	68	68	74	69	65	65	69	65	62	62	59
3	86	75	67	60	83	73	65	59	69	62	57	57	64	59	54	54	61	56	52	52	49
4	79	66	57	50	76	64	56	50	61	53	48	48	57	51	46	46	54	49	44	44	42
5	72	59	50	43	69	57	49	42	54	47	41	41	51	45	40	40	48	43	38	38	36
6	67	53	44	37	64	52	43	37	49	41	36	36	46	40	35	35	44	38	34	34	31
7	62	48	39	33	59	47	38	32	44	37	31	31	42	35	31	31	40	34	30	30	27
8	57	44	35	29	55	43	34	29	40	33	28	28	38	32	27	27	36	31	26	26	24
9	54	40	32	26	52	39	31	26	37	30	25	25	35	29	24	24	34	28	24	24	22
10	50	37	29	24	48	36	28	23	34	27	23	23	33	27	22	22	31	26	22	22	20

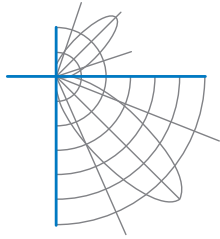
For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are lambertian reflectors. 2) Incident flux on each surface is uniformly distributed. 3) The room is spectrally neutral. When luminaires are not evenly distributed throughout the room, or do not exhibit lateral symmetry, CU values may differ from actual performance.

Circle of Light Plot			
Height(ft)	Illuminance at Nadir (fc)	Ground-level distance to half-of-nadir illuminance (ft)	
		0-180 deg	90-270 deg
6.0	13.7	7.72	7.77
8.0	7.7	10.30	10.37
10.0	4.9	12.87	12.96
12.0	3.4	15.45	15.55
14.0	2.5	18.02	18.14
16.0	1.9	20.60	20.73

Spacing Criterion	
0 deg:	1.3
90 deg:	1.3
180 deg:	1.3
270 deg:	1.3

Average Luminance (cd/m <sup>2</sup> )			
	0 deg Plane	45 deg Plane	90 deg Plane
0	2339	2339	2339
45	1779	1752	1737
55	1609	1576	1562
65	1399	1364	1351
75	1126	1089	1083
85	732	700	708

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	119.2°
Field Angle:	173.3°
90-270 Degree Plane	
Beam Angle:	120.6°
Field Angle:	175.0°



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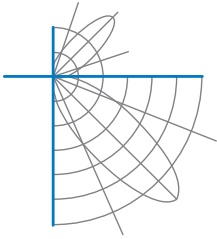
#### UGR Table - Corrected

##### Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

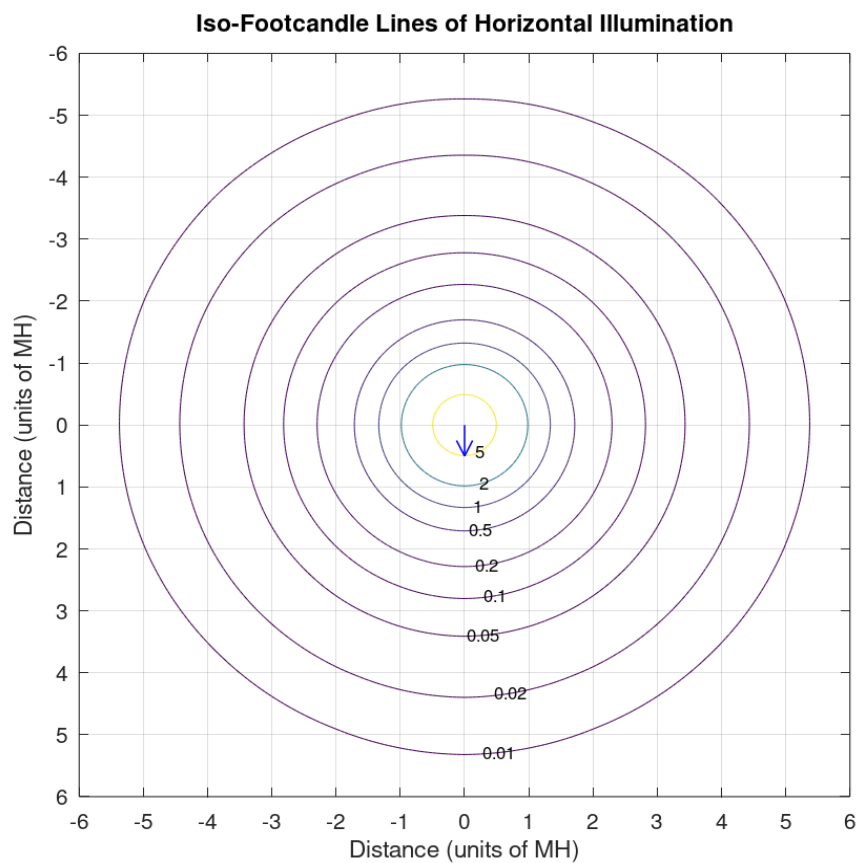
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	11.8	13.2	12.3	13.7	14.3	11.9	13.4	12.4	13.9	14.4
	3H	13.6	15.0	14.2	15.5	16.1	13.8	15.2	14.4	15.7	16.3
	4H	14.4	15.7	14.9	16.2	16.8	14.6	15.9	15.2	16.4	17.0
	6H	15.0	16.2	15.6	16.7	17.3	15.3	16.4	15.8	17.0	17.6
	8H	15.2	16.3	15.8	16.9	17.5	15.5	16.6	16.1	17.2	17.8
	12H	15.4	16.5	16.0	17.0	17.7	15.7	16.8	16.3	17.4	18.0
4H	2H	12.4	13.6	12.9	14.2	14.8	12.5	13.8	13.0	14.3	14.9
	3H	14.5	15.5	15.0	16.1	16.7	14.6	15.7	15.2	16.3	16.9
	4H	15.3	16.3	15.9	16.9	17.5	15.5	16.5	16.1	17.1	17.8
	6H	16.1	16.9	16.7	17.5	18.2	16.3	17.2	16.9	17.8	18.5
	8H	16.3	17.2	17.0	17.8	18.5	16.6	17.5	17.2	18.1	18.7
	12H	16.6	17.3	17.2	18.0	18.6	16.9	17.6	17.5	18.3	19.0
8H	4H	15.6	16.5	16.2	17.1	17.7	15.8	16.7	16.4	17.3	17.9
	6H	16.5	17.2	17.2	17.9	18.5	16.8	17.5	17.4	18.1	18.8
	8H	16.9	17.5	17.5	18.2	18.9	17.2	17.8	17.8	18.4	19.1
	12H	17.2	17.8	17.9	18.4	19.2	17.5	18.1	18.2	18.7	19.5
12H	4H	15.7	16.4	16.3	17.1	17.7	15.9	16.6	16.5	17.2	17.9
	6H	16.6	17.2	17.3	17.8	18.6	16.8	17.5	17.5	18.1	18.8
	8H	17.0	17.6	17.7	18.2	19.0	17.3	17.8	17.9	18.5	19.3

Maximum UGR = 19.5

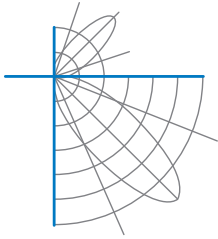


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### Iso-Illuminance Plot



The isofootcandle values shown in the plot above are based on a mounting height of  $h = 8.0$  feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.

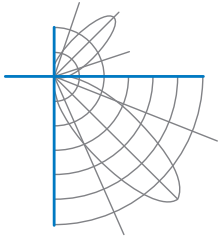


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**Additional Pictures of Test Subject**







## Report of Test

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Test Distance                    9.5 m  
Ambient Temperature        25.1 °C

#### Notes

The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of IES LM-79-19. Format of reports and angular increments based on IES LM-41-20 and LM-46-20.

The luminous intensity values, and other derived quantities, contained in this report are based on the absolute data, as measured.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the CIE C-Gamma coordinate system as defined in CIE publication number 121.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.