



Report of Test

LLIA001912-003

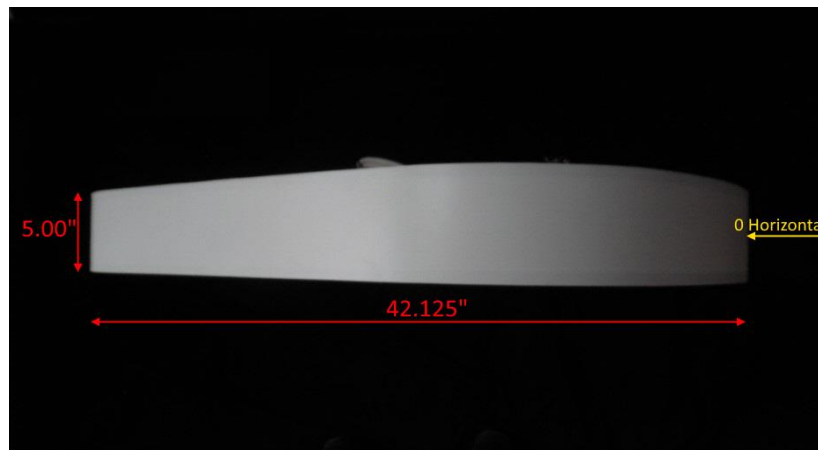
Indoor Distribution Photometry Test Report

Catalog Number: NEXUS 42" x 5" Drum Pendant

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

954 white LEDs on Q-Tran 3500K 5W/FT Light Strips. 930 LEDs visible.

Two ERP VZM100W-24 LED drivers



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

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	8565.1 Lumens
Input Current	1.145 A	Total Efficacy	63.1 lm/W
Input Power	135.8 W	Downward Flux	8183.5 Lumens
Frequency	60.00 Hz	Downward Flux	95.5 % of Total
Power Factor	0.988		
Current THD	11.6 %		

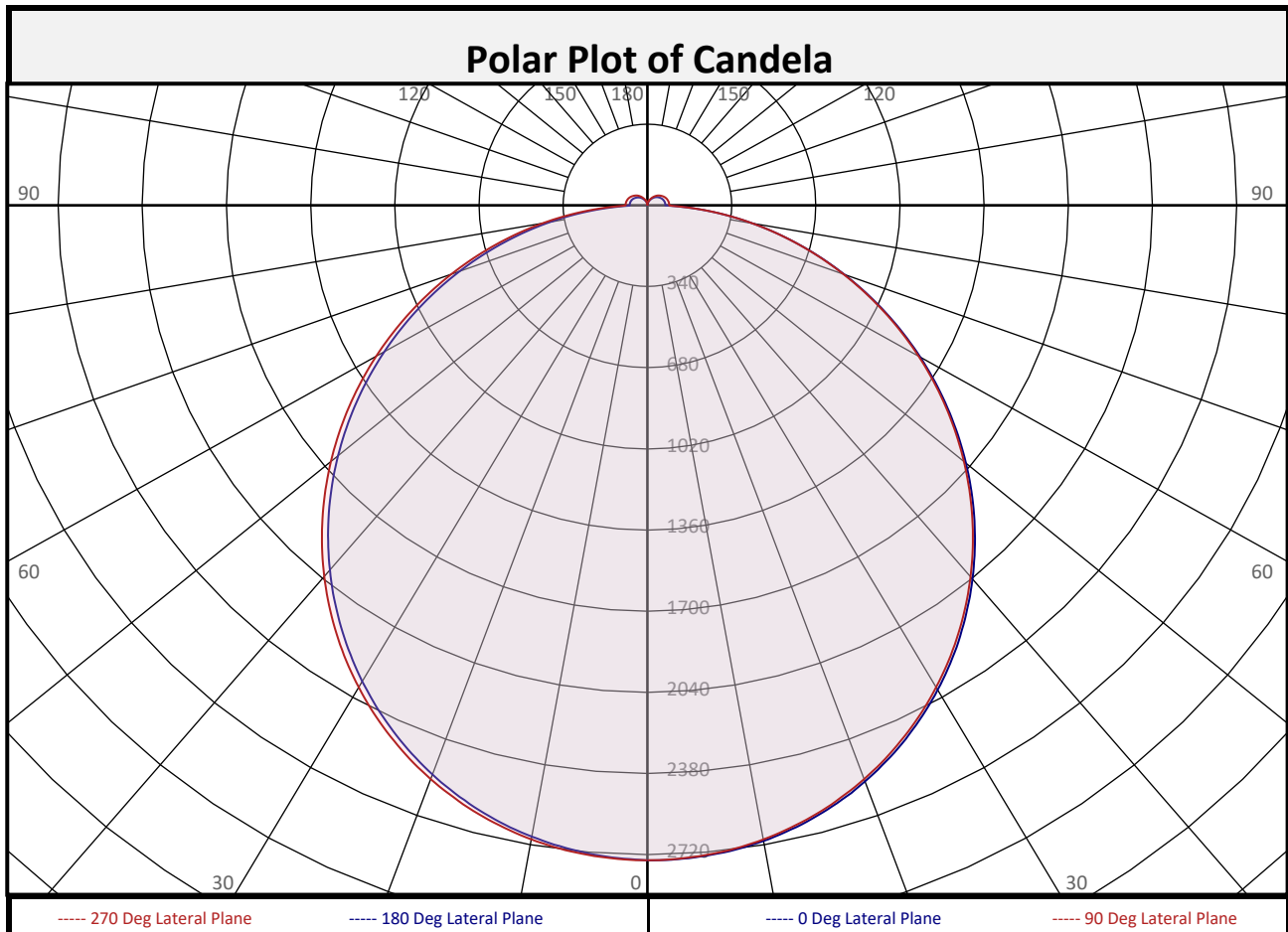
This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

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	259.8	3.0%	90-100	87.1	1.0%	0-20	1004	11.7%
10-20	744.4	8.7%	100-110	81.7	1.0%	0-30	2134	24.9%
20-30	1130	13.2%	110-120	71.3	0.8%	0-40	3501	40.9%
30-40	1367	16.0%	120-130	56.9	0.7%	0-60	6236	72.8%
40-50	1427	16.7%	130-140	41.3	0.5%	0-80	7932	92.6%
50-60	1308	15.3%	140-150	25.6	0.3%	10-90	7924	92.5%
60-70	1036	12.1%	150-160	12.7	0.1%	20-50	3923	45.8%
70-80	660.0	7.7%	160-170	4.4	0.1%	40-90	4683	54.7%
80-90	251.9	2.9%	170-180	0.7	0.0%	60-90	1948	22.7%
0-90	8183	95.5%	90-180	381.6	4.5%	0-180	8565	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	2744	2744	2744	2744	2744	2744	2744	2744	2744
	2.5	2742	2743	2742	2741	2741	2740	2739	2738	2737
	5	2735	2735	2734	2733	2732	2731	2729	2727	2726
	7.5	2723	2723	2721	2719	2718	2716	2713	2711	2708
	10	2704	2704	2701	2700	2697	2695	2692	2688	2686
	12.5	2678	2678	2675	2674	2671	2668	2664	2660	2658
	15	2648	2647	2645	2643	2639	2636	2630	2626	2624
	17.5	2611	2610	2607	2606	2601	2597	2592	2586	2583
	20	2569	2567	2565	2562	2558	2553	2547	2540	2538
	22.5	2520	2520	2517	2514	2510	2504	2498	2490	2487
	25	2468	2466	2462	2460	2455	2449	2442	2433	2430
	27.5	2408	2407	2404	2401	2396	2390	2382	2373	2370
	30	2344	2342	2339	2337	2331	2325	2317	2307	2303
	32.5	2276	2274	2271	2268	2263	2256	2247	2237	2231
	35	2203	2200	2197	2195	2189	2182	2174	2163	2157
	37.5	2124	2122	2119	2118	2112	2105	2095	2084	2078
	40	2042	2039	2037	2035	2030	2022	2013	2000	1994
	42.5	1957	1954	1951	1950	1945	1936	1927	1915	1908
	45	1868	1864	1862	1860	1855	1848	1838	1825	1819
	47.5	1775	1772	1770	1768	1763	1756	1746	1733	1726
50	1679	1676	1674	1673	1668	1661	1651	1637	1631	
52.5	1581	1577	1575	1575	1570	1563	1552	1539	1532	
55	1479	1476	1475	1475	1470	1463	1453	1439	1432	
57.5	1378	1374	1373	1373	1368	1361	1352	1337	1331	
60	1273	1269	1268	1269	1265	1258	1248	1234	1227	
62.5	1167	1163	1162	1164	1160	1153	1144	1129	1123	
65	1060	1056	1056	1058	1054	1048	1039	1024	1018	
67.5	953	949	949	951	948	942	933	918	912	
70	846	842	843	845	842	837	828	813	807	
72.5	740	735	736	739	737	732	723	708	702	
75	634	630	631	634	632	628	619	605	599	
77.5	530	526	527	531	529	525	517	503	497	
80	428	424	425	429	428	425	417	403	397	
82.5	328	323	326	330	329	326	319	305	300	
85	230	226	229	233	233	230	224	210	205	
87.5	138	134	137	142	143	141	135	122	117	
90	74	71	76	84	89	90	87	76	72	

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

North America (issuing laboratory)

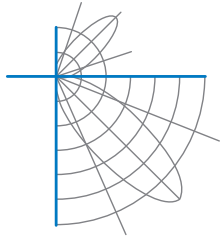
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Luminous Intensity (Candela) Table

		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	74	71	76	84	89	90	87	76	72
	92.5	72	70	75	83	88	90	87	76	72
	95	72	70	75	83	88	90	87	76	71
	97.5	72	69	75	83	87	89	86	75	71
	100	72	69	74	82	87	89	86	75	71
	102.5	71	68	73	81	86	88	85	74	70
	105	70	67	72	80	85	87	84	73	69
	107.5	69	67	72	79	84	86	83	72	68
	110	68	65	70	78	82	84	81	71	67
	112.5	67	64	69	77	81	82	80	70	66
	115	65	63	67	75	79	80	78	68	64
	117.5	64	61	66	73	77	78	76	67	62
	120	62	60	64	71	75	76	74	65	60
	122.5	60	58	62	68	72	73	71	62	58
	125	58	56	59	66	69	71	69	60	56
	127.5	56	54	57	64	67	68	66	58	54
	130	54	52	55	61	64	65	63	56	52
	132.5	51	49	52	58	61	63	61	53	49
	135	49	47	50	55	58	59	58	51	47
	137.5	46	44	47	52	55	56	54	48	44
140	43	42	44	49	52	52	51	45	41	
142.5	40	39	41	46	48	49	47	42	38	
145	37	36	38	42	44	45	44	39	35	
147.5	34	33	35	38	41	42	40	35	32	
150	31	30	31	35	37	38	37	32	29	
152.5	28	27	28	31	33	34	33	29	26	
155	25	24	25	28	30	30	29	26	23	
157.5	22	21	22	24	26	26	26	23	21	
160	19	18	19	21	23	23	22	20	18	
162.5	16	16	16	18	19	19	19	17	15	
165	14	13	14	15	16	16	16	14	13	
167.5	11	11	11	12	13	13	13	11	10	
170	10	9	9	10	10	10	10	9	8	
172.5	8	7	7	7	8	8	8	7	7	
175	6	6	5	5	6	6	6	5	5	
177.5	5	5	5	5	5	5	5	5	5	
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	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96			
1	107	102	97	93	104	99	95	91	94	91	88	89	87	84	85	83	81	79			
2	97	88	81	75	94	86	80	74	82	76	72	78	73	69	74	71	67	65			
3	88	77	69	62	85	75	68	61	72	65	60	68	63	58	65	61	57	54			
4	81	68	59	53	78	67	58	52	64	56	51	61	55	50	58	53	48	46			
5	74	61	52	45	72	60	51	45	57	49	44	55	48	43	52	47	42	40			
6	68	55	46	39	66	54	45	39	51	44	38	49	43	37	47	41	37	35			
7	63	50	41	35	61	49	40	34	47	39	34	45	38	33	43	37	33	31			
8	59	45	37	31	57	44	36	31	43	35	30	41	34	30	40	34	29	27			
9	55	42	33	28	53	41	33	27	39	32	27	38	31	27	37	31	26	24			
10	52	38	30	25	50	38	30	25	36	29	25	35	29	24	34	28	24	22			

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	76.2	7.55	7.58
8.0	42.9	10.07	10.10
10.0	27.4	12.59	12.63
12.0	19.1	15.10	15.15
14.0	14.0	17.62	17.68
16.0	10.7	20.14	20.21

Spacing Criterion	
0 deg:	1.3
90 deg:	1.3
180 deg:	1.2
270 deg:	1.3

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	3888	3888	3888
45	3196	3157	3118
55	2936	2892	2849
65	2600	2547	2502
75	2116	2057	2014
85	1263	1206	1185

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	114.1°
Field Angle:	167.0°
90-270 Degree Plane	
Beam Angle:	114.8°
Field Angle:	167.8°



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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

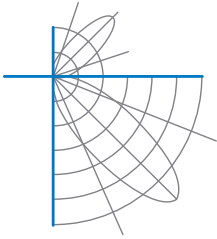
Room Size

UGR Viewed Crosswise

UGR Viewed Endwise

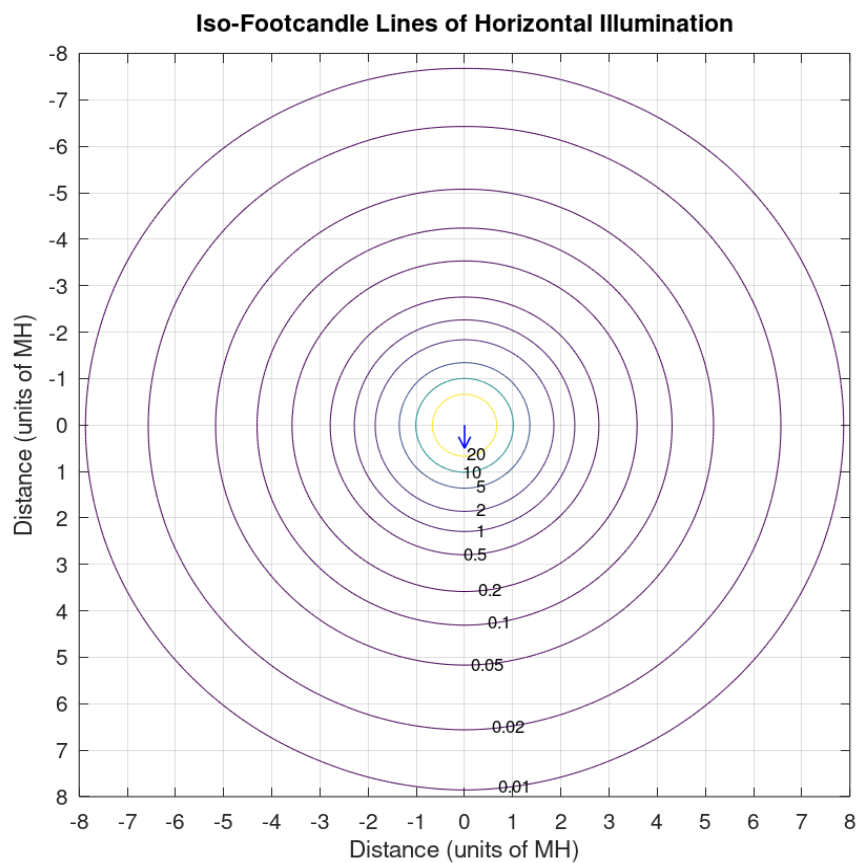
X=2H	Y=2H	14.3	15.8	14.7	16.3	16.7	14.3	15.8	14.8	16.3	16.7
		3H	16.1	17.5	16.6	18.0	18.4	16.2	17.6	16.6	18.0
	4H	16.8	18.2	17.3	18.6	19.1	16.9	18.2	17.4	18.7	19.1
	6H	17.4	18.6	17.9	19.1	19.6	17.4	18.7	17.9	19.1	19.6
	8H	17.6	18.7	18.1	19.2	19.8	17.6	18.8	18.1	19.3	19.8
	12H	17.7	18.8	18.2	19.3	19.9	17.8	18.9	18.3	19.4	19.9
4H	2H	14.9	16.2	15.4	16.7	17.2	14.9	16.2	15.4	16.7	17.2
		3H	17.0	18.1	17.4	18.6	19.1	17.0	18.1	17.5	18.6
	4H	17.8	18.8	18.3	19.3	19.9	17.8	18.8	18.3	19.3	19.9
	6H	18.5	19.4	19.0	19.9	20.5	18.5	19.4	19.0	19.9	20.5
	8H	18.7	19.5	19.2	20.1	20.6	18.8	19.6	19.3	20.1	20.7
	12H	18.9	19.6	19.4	20.2	20.8	18.9	19.7	19.5	20.3	20.8
8H	4H	18.1	18.9	18.6	19.5	20.0	18.1	18.9	18.6	19.5	20.1
	6H	18.9	19.6	19.5	20.2	20.7	18.9	19.6	19.5	20.2	20.8
	8H	19.2	19.8	19.8	20.4	21.0	19.2	19.9	19.8	20.5	21.1
	12H	19.5	20.0	20.0	20.6	21.3	19.5	20.1	20.1	20.7	21.3
12H	4H	18.1	18.9	18.7	19.4	20.0	18.1	18.9	18.7	19.5	20.0
	6H	19.0	19.6	19.5	20.1	20.8	19.0	19.6	19.6	20.2	20.8
	8H	19.3	19.9	19.9	20.4	21.1	19.4	19.9	19.9	20.5	21.2

Maximum UGR = 21.3



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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





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Test Distance 9.5 m
Ambient Temperature 25.2 °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.

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