

Report of Test

LLIA001799-003

Indoor Distribution Photometry Test Report

Catalog Number: L1.3X-1-DMX with Intensifier and Control Screen

Yoke mounted, formed aluminum housing, formed semi-specular aluminum reflector/heatsink, frosted plastic enclosure above plastic baffle with specular aluminum interior and hexcell louver.

476 white LEDs on two white circuit boards with 238 LEDs each.

Two Advance Xitanium XI075C-200V054BST1 LED drivers, one Feno DMX controller.



Prepared For:

Brightline L.P.

580 Mayer Street

Suite 7

Bridgeville, PA 15017, USA

Performance Summary

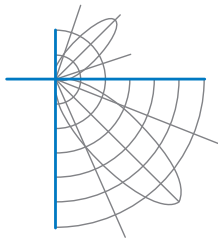
Input Voltage	120.0 Vac	Luminous Flux	2756.3 Lumens
Input Current	1.245 A	Total Efficacy	18.5 Lm/W
Input Power	148.8 W	Downward Flux	2756.3 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.996		
Current THD	8.3 %		

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

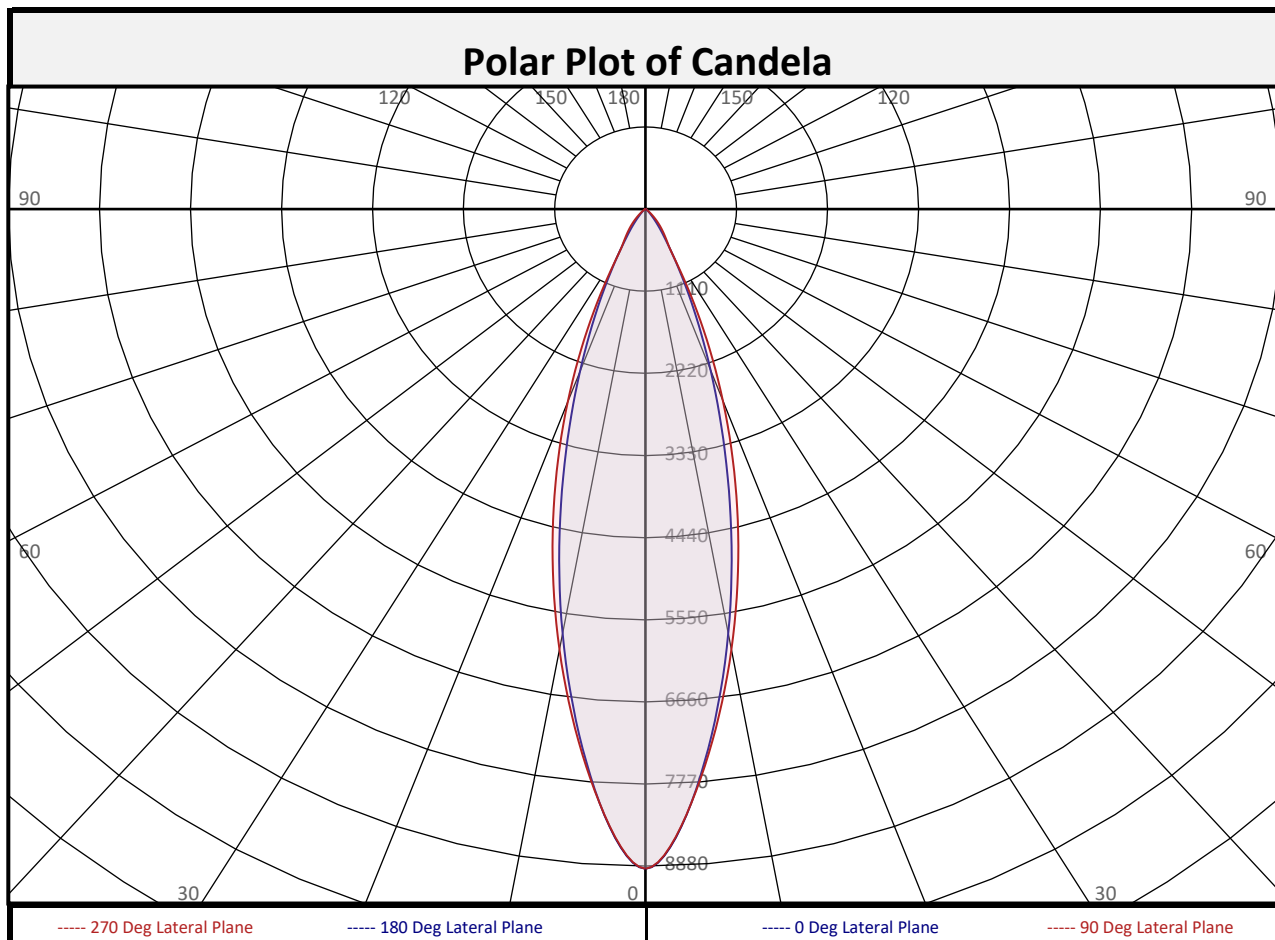
Test date: 07/12/2022

Report date: 07/12/2022

Signed: _____

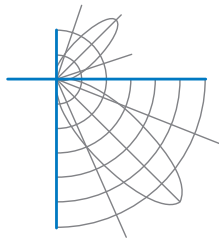


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Zonal Flux Summary

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	683.0	24.8%	90-100	0.0	0.0%	0-20	1828	66.3%
10-20	1145	41.5%	100-110	0.0	0.0%	0-30	2405	87.3%
20-30	577.8	21.0%	110-120	0.0	0.0%	0-40	2636	95.6%
30-40	230.3	8.4%	120-130	0.0	0.0%	0-60	2747	99.7%
40-50	86.2	3.1%	130-140	0.0	0.0%	0-80	2756	100.0%
50-60	25.1	0.9%	140-150	0.0	0.0%	10-90	2073	75.2%
60-70	6.9	0.3%	150-160	0.0	0.0%	20-50	894.3	32.4%
70-80	1.9	0.1%	160-170	0.0	0.0%	40-90	120.4	4.4%
80-90	0.4	0.0%	170-180	0.0	0.0%	60-90	9.2	0.3%
0-90	2756	100.0%	90-180	0.0	0.0%	0-180	2756	100.0%

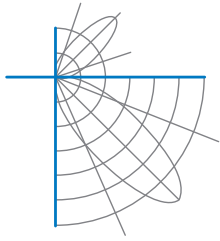


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Luminous Intensity (Candela) Table

		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	8916	8916	8916	8916	8916	8916	8916	8916	8916
	2.5	8505	8508	8510	8502	8495	8502	8510	8508	8505
	5	7694	7717	7791	7775	7727	7775	7791	7717	7694
	7.5	6771	6813	6952	6950	6895	6950	6952	6813	6771
	10	5823	5896	6080	6090	6046	6090	6080	5896	5823
	12.5	4867	4976	5190	5211	5194	5211	5190	4976	4867
	15	3940	4075	4294	4333	4360	4333	4294	4075	3940
	17.5	3084	3204	3396	3464	3547	3464	3396	3204	3084
	20	2337	2402	2527	2620	2776	2620	2527	2402	2337
	22.5	1704	1690	1746	1860	2053	1860	1746	1690	1704
	25	1190	1091	1117	1258	1397	1258	1117	1091	1190
	27.5	806	664	727	847	840	847	727	664	806
	30	537	515	602	618	560	618	602	515	537
	32.5	373	428	503	499	457	499	503	428	373
	35	262	351	408	393	373	393	408	351	262
	37.5	180	278	318	297	300	297	318	278	180
	40	121	210	237	212	233	212	237	210	121
	42.5	84	152	172	145	173	145	172	152	84
	45	60	106	121	100	121	100	121	106	60
	47.5	43	74	86	70	83	70	86	74	43
50	31	53	62	50	59	50	62	53	31	
52.5	22	37	44	35	42	35	44	37	22	
55	16	26	31	25	29	25	31	26	16	
57.5	12	19	22	17	21	17	22	19	12	
60	8	13	16	12	14	12	16	13	8	
62.5	6	9	11	9	10	9	11	9	6	
65	4	6	8	6	7	6	8	6	4	
67.5	3	5	5	4	5	4	5	5	3	
70	2	3	4	3	4	3	4	3	2	
72.5	2	2	3	2	2	2	3	2	2	
75	1	2	2	2	2	2	2	2	1	
77.5	1	1	1	1	1	1	1	1	1	
80	1	1	1	1	1	1	1	1	1	
82.5	1	1	1	0	1	0	1	1	1	
85	0	0	0	0	0	0	0	0	0	
87.5	0	0	0	0	0	0	0	0	0	
90	0	0	0	0	0	0	0	0	0	

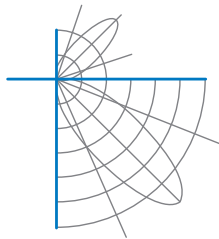


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Luminous Intensity (Candela) Table

		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.	90	0	0	0	0	0	0	0	0	0
	92.5	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0
	97.5	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0
	102.5	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0
	107.5	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0
	112.5	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0
	117.5	0	0	0	0	0	0	0	0	0
	120	0	0	0	0	0	0	0	0	0
	122.5	0	0	0	0	0	0	0	0	0
	125	0	0	0	0	0	0	0	0	0
	127.5	0	0	0	0	0	0	0	0	0
	130	0	0	0	0	0	0	0	0	0
	132.5	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0
	137.5	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	
142.5	0	0	0	0	0	0	0	0	0	
145	0	0	0	0	0	0	0	0	0	
147.5	0	0	0	0	0	0	0	0	0	
150	0	0	0	0	0	0	0	0	0	
152.5	0	0	0	0	0	0	0	0	0	
155	0	0	0	0	0	0	0	0	0	
157.5	0	0	0	0	0	0	0	0	0	
160	0	0	0	0	0	0	0	0	0	
162.5	0	0	0	0	0	0	0	0	0	
165	0	0	0	0	0	0	0	0	0	
167.5	0	0	0	0	0	0	0	0	0	
170	0	0	0	0	0	0	0	0	0	
172.5	0	0	0	0	0	0	0	0	0	
175	0	0	0	0	0	0	0	0	0	
177.5	0	0	0	0	0	0	0	0	0	
180	0	0	0	0	0	0	0	0	0	



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	103	100	108	104	101	99	101	99	96	98	96	94	95	94	92	91
3	106	100	96	93	104	99	95	92	97	93	91	94	92	90	92	90	88	87
4	102	96	91	88	100	94	90	87	92	89	86	91	88	85	89	86	84	83
5	98	91	86	83	97	90	86	83	89	85	82	87	84	81	86	83	81	79
6	94	87	82	79	93	86	82	79	85	81	78	84	80	78	83	80	77	76
7	91	84	79	75	90	83	78	75	82	78	75	81	77	74	80	77	74	73
8	88	80	76	72	87	80	75	72	79	75	72	78	74	72	77	74	71	70
9	85	77	73	69	84	77	72	69	76	72	69	75	71	69	74	71	69	68
10	82	74	70	67	81	74	70	67	73	69	66	73	69	66	72	69	66	65

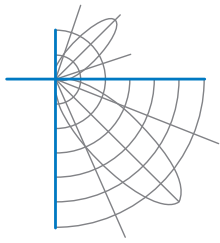
For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are 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	247.7	2.70	2.89	
8.0	139.3	3.60	3.85	
10.0	89.2	4.50	4.81	
12.0	61.9	5.40	5.77	
14.0	45.5	6.30	6.73	
16.0	34.8	7.20	7.70	

Spacing Criterion	
0 deg:	0.4
90 deg:	0.5
180 deg:	0.4
270 deg:	0.5

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	45612	45612	45612
45	437	878	876
55	143	278	262
65	52	92	85
75	23	38	31
85	19	23	15

Beam and Field Angle	
0-180 Degree Plane	
Beam Angle:	27.1°
Field Angle:	53.7°
90-270 Degree Plane	
Beam Angle:	29.4°
Field Angle:	54.5°



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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

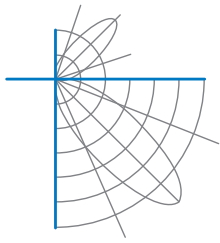
Room Size

UGR Viewed Crosswise

UGR Viewed Endwise

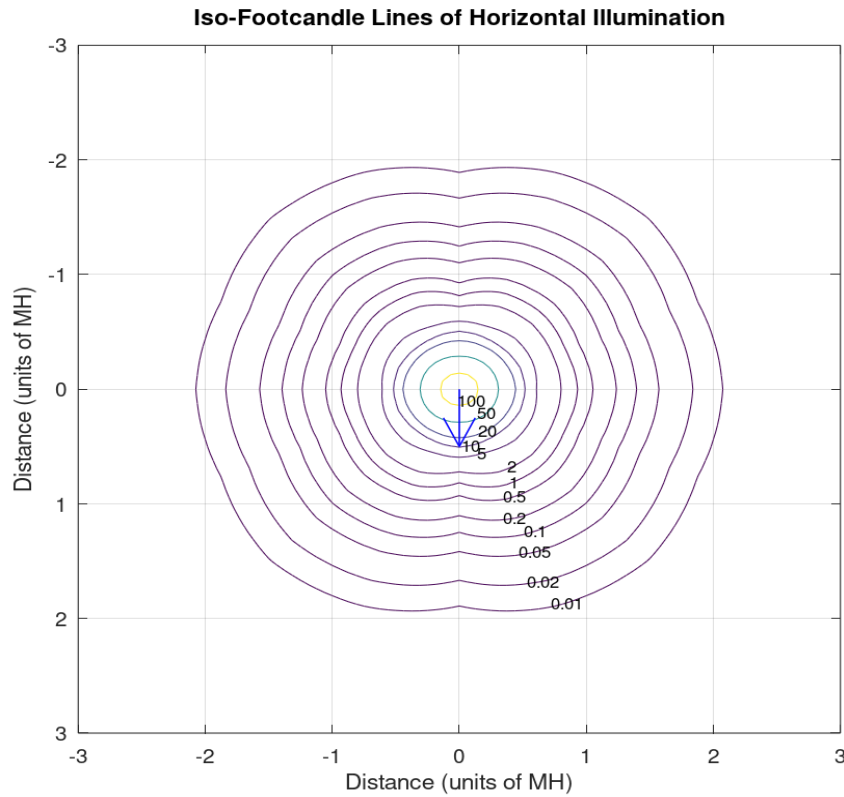
X=2H	Y=2H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		3H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
		4H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
		6H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
		8H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
		12H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
4H	2H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		3H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		4H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		6H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		8H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		12H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
8H	4H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		6H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		8H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		12H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
12H	4H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		6H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
		8H	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	

Maximum UGR = 3.6

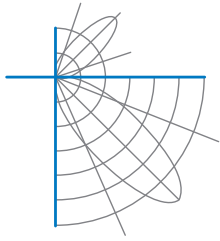


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Iso-Illuminance Plot



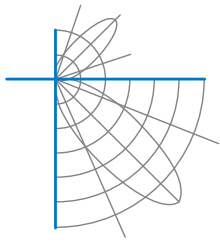
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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



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Additional Pictures of Test Subject





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Test Distance 9.5 m
Ambient Temperature 25.1 °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.