

Report of Test

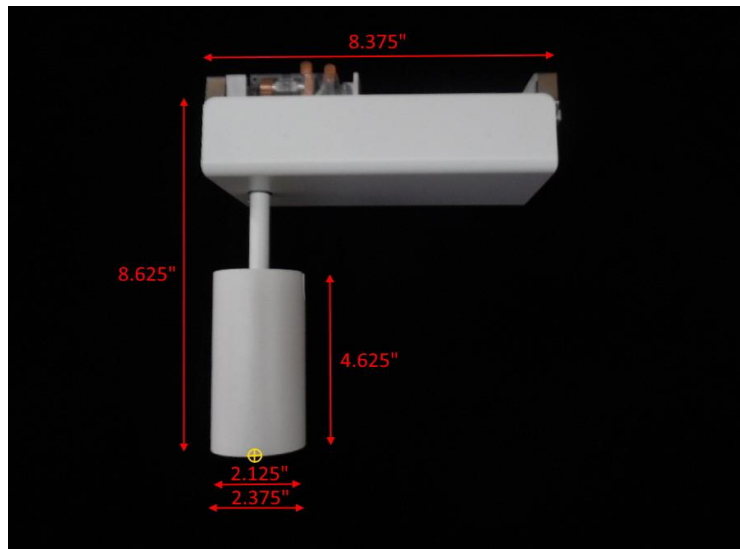
LLIA001532-006

Indoor Distribution Photometry Test Report

Catalog Number: C20-L1090TH-9HCE0PA-P2, 25 degree optic 6500K
Track mounted steel driver housing with cylindrical aluminum luminaire housing,
clear multi-faceted clear conical lens below LED and black plastic baffle.

One "Bridgelux Vesta 9mm Tunable" White LED

One eldoLED DUALdrive 561/S LED driver



Prepared For:
LiteLab, Inc
251 Elm Street
Buffalo, NY 14203, USA

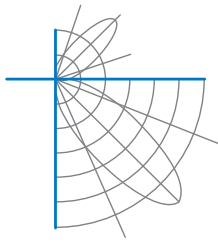
Performance Summary			
Input Voltage	120.0 V	Luminous Flux	448.0 Lumens
Input Current	0.0979 A	Total Efficacy	40.5 Lm/W
Input Power	11.06 W	Downward Flux	448.0 Lumens
Frequency	60.00 Hz	Downward Flux	100.0 % of Total
Power Factor	0.942		
Current THD	14.1 %		

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

Test date: 08/30/2021

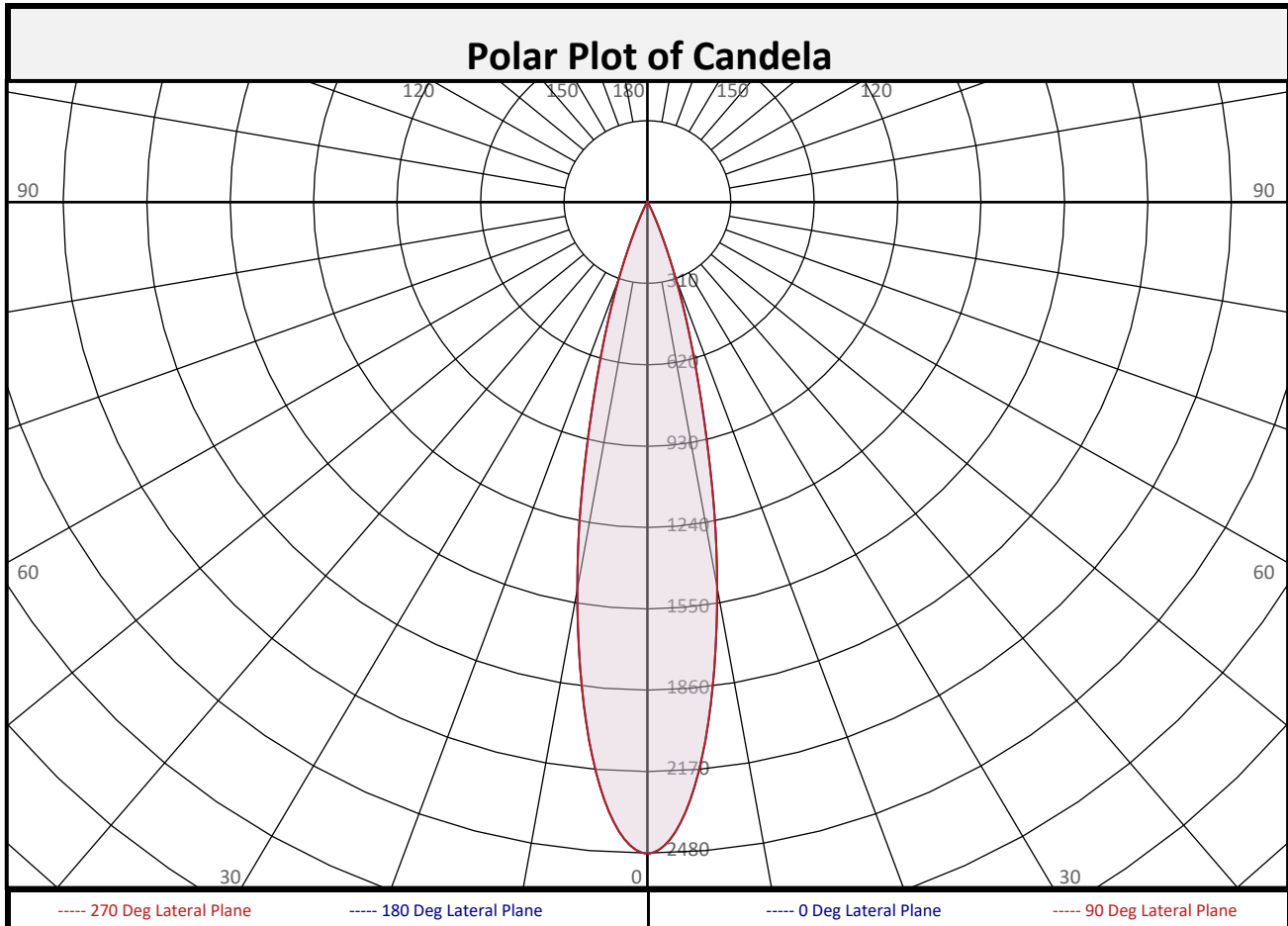
Report date: 09/01/2021

Signed: _____



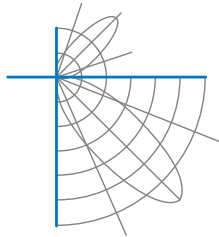
Report of Test

LLIA001532-006



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	185.6	41.4%	90-100	0.0	0.0%	0-20	398.4	88.9%
10-20	212.8	47.5%	100-110	0.0	0.0%	0-30	441.1	98.5%
20-30	42.7	9.5%	110-120	0.0	0.0%	0-40	446.0	99.6%
30-40	4.8	1.1%	120-130	0.0	0.0%	0-60	447.7	99.9%
40-50	1.3	0.3%	130-140	0.0	0.0%	0-80	448.0	100.0%
50-60	0.4	0.1%	140-150	0.0	0.0%	10-90	262.3	58.6%
60-70	0.2	0.0%	150-160	0.0	0.0%	20-50	48.9	10.9%
70-80	0.1	0.0%	160-170	0.0	0.0%	40-90	2.0	0.4%
80-90	0.0	0.0%	170-180	0.0	0.0%	60-90	0.2	0.0%
0-90	448.0	100.0%	90-180	0.0	0.0%	0-180	448.0	100.0%

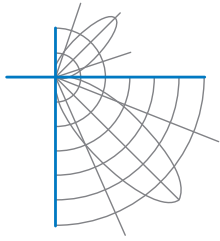


Report of Test

LLIA001532-006

Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	0	2483	2483	2483	2483	2483	2483	2483	2483	2483
	2.5	2401	2401	2401	2401	2401	2401	2401	2401	2401
	5	2182	2182	2182	2182	2182	2182	2182	2182	2182
	7.5	1862	1862	1862	1862	1862	1862	1862	1862	1862
	10	1495	1495	1495	1495	1495	1495	1495	1495	1495
	12.5	1116	1116	1116	1116	1116	1116	1116	1116	1116
	15	763	763	763	763	763	763	763	763	763
	17.5	504	504	504	504	504	504	504	504	504
	20	303	303	303	303	303	303	303	303	303
	22.5	156	156	156	156	156	156	156	156	156
	25	70	70	70	70	70	70	70	70	70
	27.5	31	31	31	31	31	31	31	31	31
	30	17	17	17	17	17	17	17	17	17
	32.5	11	11	11	11	11	11	11	11	11
	35	7	7	7	7	7	7	7	7	7
	37.5	5	5	5	5	5	5	5	5	5
	40	3	3	3	3	3	3	3	3	3
	42.5	2	2	2	2	2	2	2	2	2
	45	2	2	2	2	2	2	2	2	2
	47.5	1	1	1	1	1	1	1	1	1
50	1	1	1	1	1	1	1	1	1	
52.5	1	1	1	1	1	1	1	1	1	
55	0	0	0	0	0	0	0	0	0	
57.5	0	0	0	0	0	0	0	0	0	
60	0	0	0	0	0	0	0	0	0	
62.5	0	0	0	0	0	0	0	0	0	
65	0	0	0	0	0	0	0	0	0	
67.5	0	0	0	0	0	0	0	0	0	
70	0	0	0	0	0	0	0	0	0	
72.5	0	0	0	0	0	0	0	0	0	
75	0	0	0	0	0	0	0	0	0	
77.5	0	0	0	0	0	0	0	0	0	
80	0	0	0	0	0	0	0	0	0	
82.5	0	0	0	0	0	0	0	0	0	
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	



Report of Test

LLIA001532-006

Luminous Intensity (Candela) Table

		Lateral (C-Plane) Angles								
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles	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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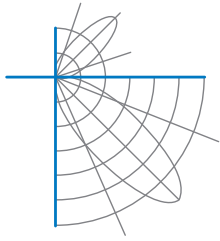
Coefficients of Utilization/Room Utilization - Zonal Cavity Method																		
Effective Floor Cavity Reflectance 0.20																		
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	115	113	112	110	113	111	110	108	107	106	105	104	103	102	100	100	99	97
2	112	109	106	103	110	107	104	102	104	102	100	101	99	98	98	97	96	95
3	109	105	101	99	107	103	100	98	101	98	96	99	97	95	96	95	93	92
4	106	101	97	95	104	100	97	94	98	95	93	96	94	92	95	93	91	90
5	103	98	94	91	102	97	93	91	95	92	90	94	91	89	93	90	89	88
6	101	95	91	88	99	94	91	88	93	90	88	92	89	87	91	88	87	86
7	98	92	89	86	97	92	88	86	91	88	85	90	87	85	89	86	85	84
8	96	90	86	84	95	89	86	83	89	85	83	88	85	83	87	84	83	82
9	94	88	84	82	93	87	84	81	87	83	81	86	83	81	85	83	81	80
10	92	86	82	80	91	85	82	80	85	82	79	84	81	79	84	81	79	78

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	69.0	2.38	2.38
8.0	38.8	3.17	3.17
10.0	24.8	3.96	3.96
12.0	17.2	4.75	4.75
14.0	12.7	5.55	5.55
16.0	9.7	6.34	6.34

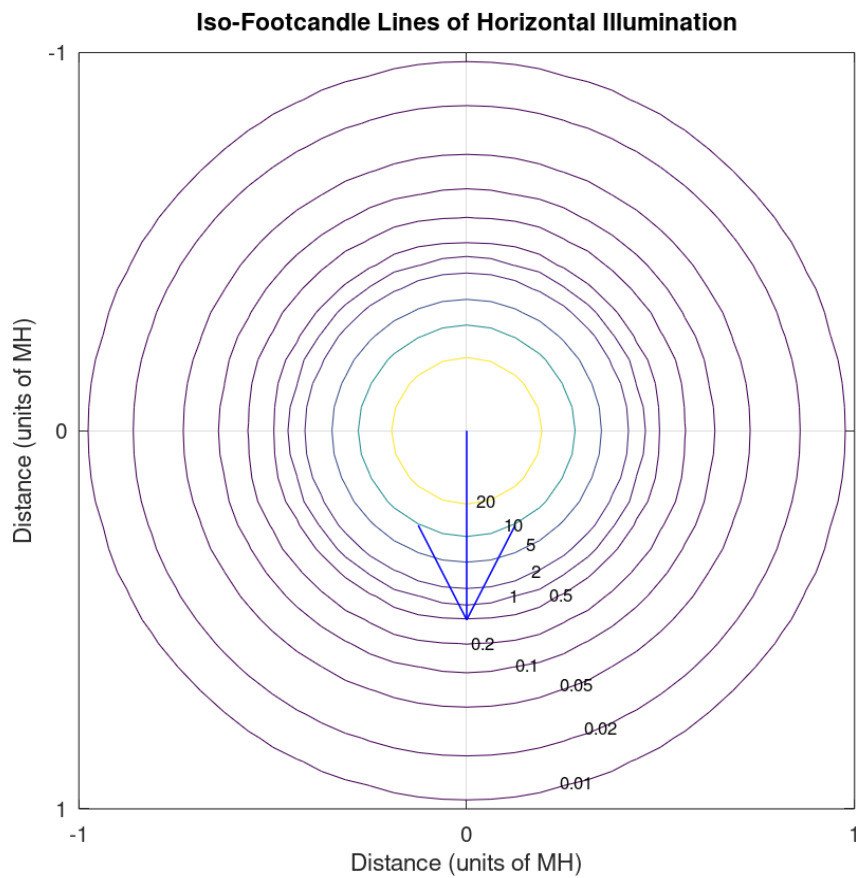
Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	1085252	1085252	1085252
45	961	961	961
55	257	257	257
65	166	166	166
75	97	97	97
85	65	65	65

Spacing Criterion	
Spacing Criterion:	0.4
Beam Angle:	23.4 °
Field Angle:	42.0 °

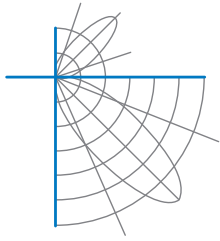


Report of Test
LLIA001532-006

Iso-Illuminance Plot



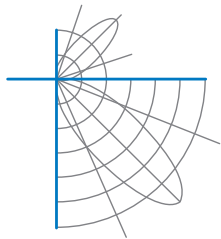
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution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



Report of Test
LLIA001532-006

Additional Pictures of Test Subject





Report of Test

LLIA001532-006

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-41-14 and LM-46-04.

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.