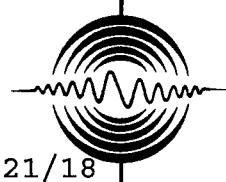


BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC.

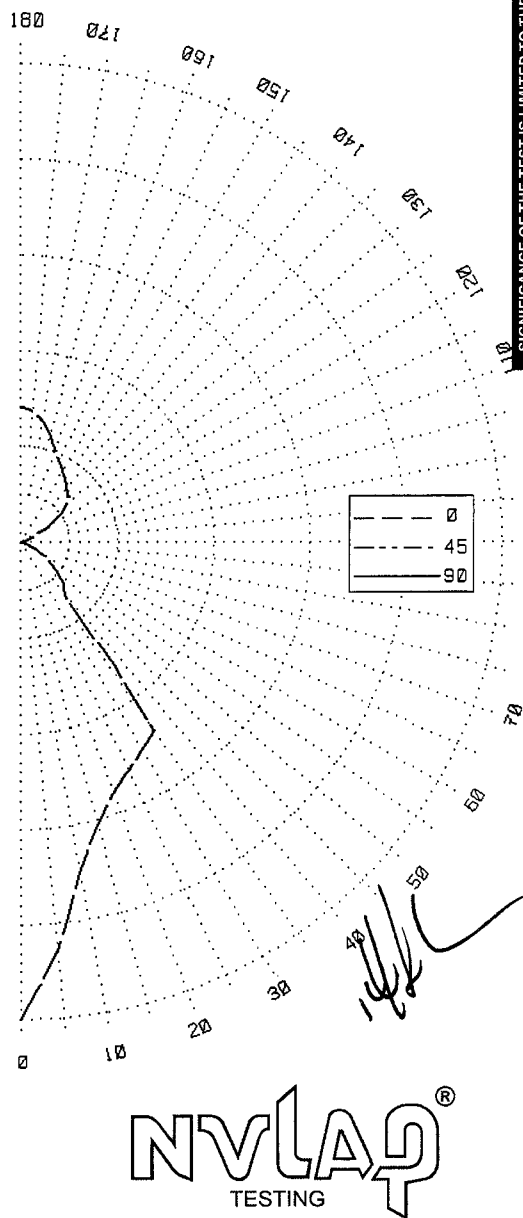
1618 HEADLAND DR.
FENTON, MO 63026
(636) 343-6006
(636) 343-6051 FAX



BALLABS CERTIFIED TEST REPORT NO.: 20619.1 DATE 11/21/18
PREPARED FOR: IMPACT ARCHITECTURAL LIGHTING - SAINT LOUIS, MO
DESCRIPTION: 1-BRIDGELUX VERO 18 SE UP & DOWN 12.5"DIA TOP w/ALUM REFL
RADIAL SILICONE DIFF-12.5"DIA BTM w/WHITE REFL & OPEN BTM
2 AC ELECTRONICS #AC-50CD1.4APC7 @ 850mA BTM & 525mA TOP
CATALOG NBR: P5113-40HI-40HI
LAMP TYPE : BRIDGELUX VERO 18 SE

CANDLEPOWER DISTRIBUTION

VERT ANG	AVERAGE CANDELA	ZONAL LUMENS
0	3876.	
5	3321.	317.0
10	2720.	
15	2372.	672.5
20	2167.	
25	2037.	942.9
30	1941.	
35	1843.	1158.1
40	551.	
45	485.	375.4
50	396.	
55	289.	259.4
60	196.	
65	130.	129.2
70	75.	
75	38.	40.7
80	18.	
85	9.	9.3
90	6.	
95	0.	.5
100	3.	
105	10.	10.8
110	31.	
115	104.	103.0
120	252.	
125	399.	357.8
130	482.	
135	533.	412.9
140	576.	
145	614.	385.9
150	662.	
155	725.	335.5
160	803.	
165	899.	254.9
170	996.	
175	1068.	102.0
180	1097.	



NVLAP[®]
TESTING

NVLAP LAB CODE 200921-0

LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT	ZONE	LUMENS	%LAMP	%FIXT
0- 30	1932.	NA.	32.9	90-120	114.	NA.	1.9
0- 40	3090.	NA.	52.7	90-130	472.	NA.	8.0
0- 60	3725.	NA.	63.5	90-150	1271.	NA.	21.7
0- 90	3905.	NA.	66.5	90-180	1963.	NA.	33.5

TOTAL LUMINAIRE = 0-180 5868. NA. 100.0

IES SPACING CRITERIA: ADJACENT= .6 DIAGONAL= .5

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LUMINANCES-CD/SQ-M
 HORIZONTAL ANGLE

VERT
 ANGLE
 45 8591.
 55 6319.
 65 3862.
 75 1864.
 85 1228.

MAXIMUM BRIGHTNESSES NOT MEASURED

ZONAL CAVITY COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE=.20

CEILING	.80				.70				.50				.30				.10				.00
WALL	.70	.50	.30	.10	.70	.50	.30	.10	.50	.30	.10	.50	.30	.10	.50	.30	.10	.50	.30	.10	.00
RCR																					
0	1.11	1.11	1.11	1.11	1.05	1.05	1.05	1.05	.93	.93	.93	.81	.81	.81	.71	.71	.71	.71	.71	.71	.67
1	1.04	1.01	.97	.95	.98	.95	.92	.90	.85	.83	.81	.76	.74	.73	.67	.66	.65	.65	.65	.65	.61
2	.97	.91	.86	.82	.92	.86	.82	.78	.78	.75	.72	.70	.67	.65	.62	.61	.59	.62	.61	.59	.56
3	.90	.83	.77	.72	.85	.79	.73	.69	.71	.67	.64	.64	.61	.59	.58	.56	.54	.56	.54	.54	.51
4	.84	.75	.69	.64	.80	.72	.66	.61	.65	.61	.57	.59	.56	.53	.54	.51	.49	.54	.51	.49	.46
5	.78	.69	.62	.57	.74	.66	.59	.55	.60	.55	.51	.55	.51	.48	.50	.47	.44	.48	.47	.44	.42
6	.73	.63	.56	.51	.70	.60	.54	.50	.55	.50	.47	.51	.47	.44	.46	.43	.41	.46	.43	.41	.38
7	.69	.58	.51	.46	.65	.56	.49	.45	.51	.46	.42	.47	.43	.40	.43	.40	.37	.43	.40	.37	.35
8	.64	.53	.46	.41	.61	.51	.45	.40	.47	.42	.38	.43	.39	.36	.40	.36	.34	.40	.36	.34	.32
9	.60	.49	.42	.37	.57	.47	.41	.36	.43	.38	.34	.40	.35	.32	.37	.33	.30	.37	.33	.30	.29
10	.56	.45	.38	.34	.53	.43	.37	.33	.40	.35	.31	.37	.32	.29	.34	.30	.28	.34	.30	.28	.26

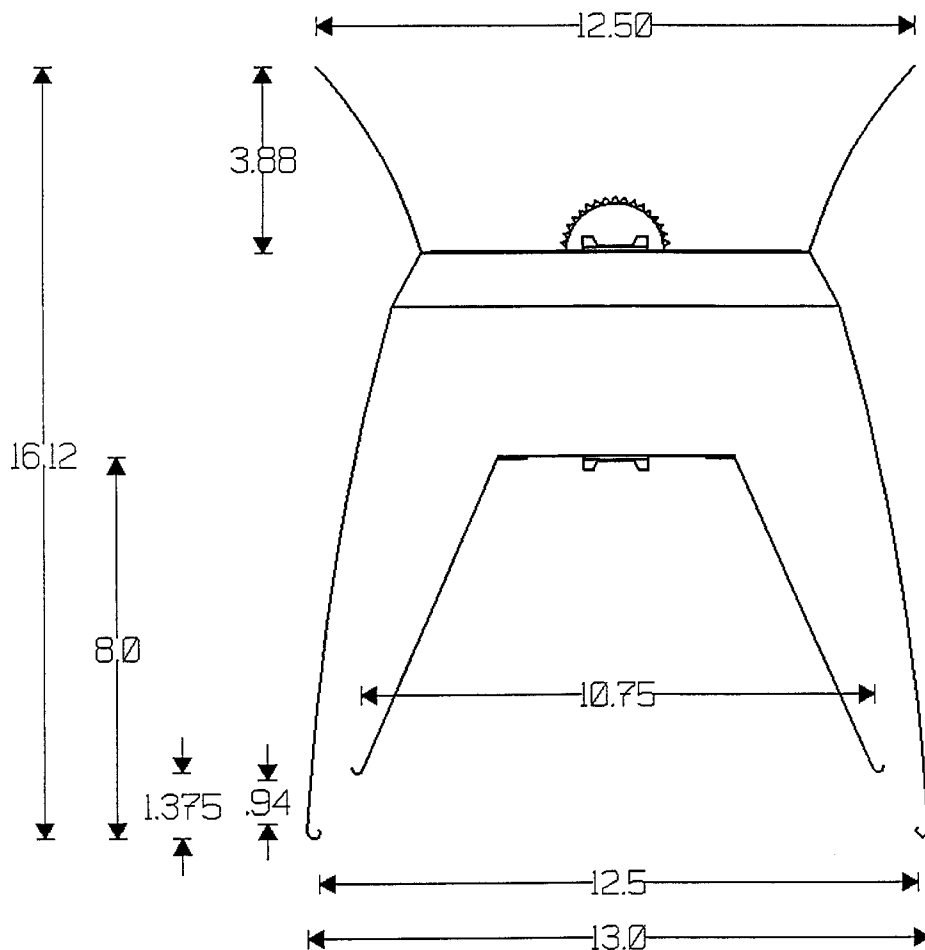
TESTED IN ACCORDANCE WITH CURRENT IES PROCEDURES

BALLABS CERTIFIED TEST REPORT NO.: 20619.1 DATE 11/21/18
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ELECTRICAL CHARACTERISTICS 120.00V .4659A 55.7940W

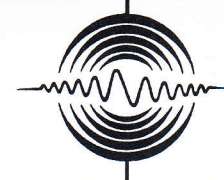
LUMINOUS EFFICACY (LUMENS / WATTS) = 105.2

TESTED IN ACCORDANCE WITH CURRENT IES STANDARDS
 UTILIZING ABSOLUTE PHOTOMETRY PER LM-79-08



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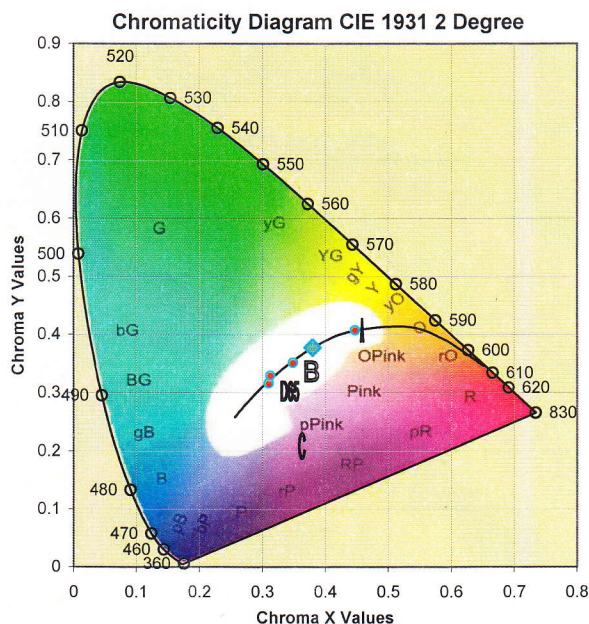
1618 HEADLAND DR.
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BALLABS CERTIFIED TEST REPORT NO.: 20619.1 A DATE 11/21/18
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CATALOG NBR: P5113-40HI-40HI
LAMP TYPE : BRIDGELUX VERO 18 SE

INPUT VOLTAGE (V)	120.00
INPUT CURRENT (A)	0.4659
INPUT WATTS (W)	55.7940
POWER FACTOR	0.9980
THDv (%)	0.162
THDi (%)	2.072
LUMINOUS EFFICACY-LPW	105.2
LUMINOUS FLUX- LUMENS	5868
CHROMA x	0.3798
CHROMA y	0.3777
CHROMA u	0.2243
CHROMA v	0.5019
DELTA uv (Duv)	0.0007
CORR COLOR TEMP (K)	4026
COLOR REND INDEX (RA)	82.79
COLOR REND INDEX (R9)	10.5

Wavelength (nm)	Spectral Flux mW/nm	Wavelength (nm)	Spectral Flux mW/nm
350	0.4750	610	94.7506
360	0.4595	620	87.2437
370	0.4330	630	76.7060
380	0.4385	640	65.0991
390	0.5303	650	53.2052
400	0.7999	660	42.1824
410	1.9126	670	32.6236
420	6.6580	680	24.8067
430	20.4699	690	18.7049
440	55.7439	700	13.9145
450	112.1532	710	10.2801
460	61.2597	720	7.6344
470	37.4932	730	5.5574
480	29.2221	740	4.0337
490	35.8262	750	3.0354
500	48.8822	760	2.2094
510	59.8191	770	1.6372
520	66.5890	780	1.2186
530	72.6898	790	0.9354
540	77.8444	800	0.6862
550	83.0635	810	0.5150
560	88.4582	820	0.4309
570	92.8034	830	0.3378
580	97.2725	840	0.2376
590	99.5047	850	0.1987
600	99.3604		



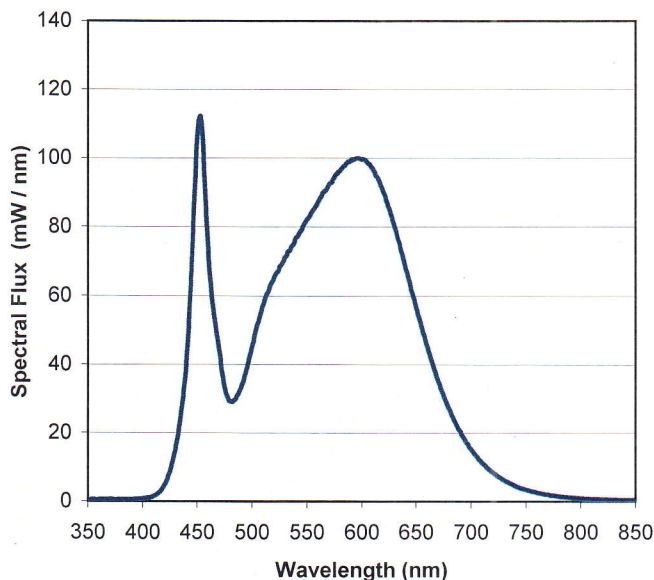
Data collected per LM79-08 using a Labsphere integrating sphere and 2100 spectroradiometer. Calibration of the spectroradiometer-sphere is traceable to the National Institute of Standards and Technology.



NVLAP LAB CODE 200921-0

[Signature]

Kelly C. Lerbs
Vice President



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