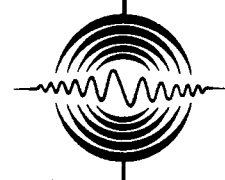


BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC.

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

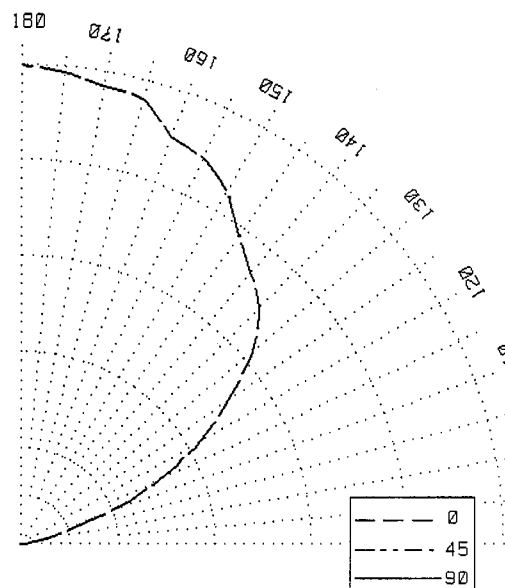


SIGNIFICANCE OF THE TEST IS LIMITED TO THE DEGREE THAT THE TESTED SAMPLE IS REPRESENTATIVE. OTHER FACTORS AFFECT FIELD PERFORMANCE.

BALLABS CERTIFIED TEST REPORT NO.: 20777.0 DATE 04/01/19
PREPARED FOR: IMPACT ARCHITECTURAL LIGHTING - SAINT LOUIS, MO
DESCRIPTION: 24-18 LED 4.4"ARRAYS (TOP) w/CLEAR 3 PIECE .125"LENS
61"DIA WHITE ALUM PENDANT RING LUMINAIRE-TOP DISTRIBUTION
2- AC ELECTRONICS #AC50CD1.4APC7 @575mA
CATALOG NBR: P7460-NDL-40HI
LAMP TYPE : LM-4.4-40K-80-54V

CANDLEPOWER DISTRIBUTION

VERT ANG	AVERAGE CANDELA	ZONAL LUMENS
0	0.	
5	0.	0.0
10	0.	0.0
15	0.	0.0
20	0.	0.0
25	0.	0.0
30	0.	0.0
35	0.	0.0
40	0.	0.0
45	0.	0.0
50	0.	0.0
55	0.	0.0
60	0.	0.0
65	0.	0.0
70	0.	0.0
75	0.	0.0
80	0.	0.0
85	0.	0.0
90	0.	0.0
95	30.	33.0
100	96.	
105	272.	287.6
110	614.	
115	1030.	1022.7
120	1412.	
125	1720.	1542.7
130	2058.	
135	2287.	1771.2
140	2428.	
145	2578.	1619.5
150	2785.	
155	2915.	1349.1
160	2972.	
165	3158.	895.3
170	3191.	
175	3249.	310.2
180	3289.	



NVLAP[®]
TESTING

NVLAP LAB CODE 200921-0

LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT	ZONE	LUMENS	%LAMP	%FIXT
0- 30	0.	NA.	.0	90-120	1343.	NA.	15.2
0- 40	0.	NA.	.0	90-130	2886.	NA.	32.7
0- 60	0.	NA.	.0	90-150	6277.	NA.	71.1
0- 90	0.	NA.	.0	90-180	8831.	NA.	100.0
TOTAL LUMINAIRE =				0-180	8831.	NA.	100.0

THIS BALLABS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THIS CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.

BALLABS CERTIFIED TEST REPORT NO.: 20777.0 DATE 04/01/19
 PREPARED FOR: IMPACT ARCHITECTURAL LIGHTING - SAINT LOUIS, MO
 DESCRIPTION: 24-18 LED 4.4"ARRAYS (TOP) w/CLEAR 3 PIECE .125"LENS
 61"DIA WHITE ALUM PENDANT RING LUMINAIRE-TOP DISTRIBUTION
 2- AC ELECTRONICS #AC50CD1.4APC7 @575mA
 CATALOG NBR: P7460-NDL-40HI
 LAMP TYPE : LM-4.4-40K-80-54V

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	.95	.95	.95	.95	.81	.81	.81	.81	.56	.56	.56	.32	.32	.32	.10	.10	.10	.10	.10	.10	.00
1	.87	.82	.79	.75	.74	.71	.68	.65	.48	.46	.45	.28	.27	.26	.09	.09	.09	.08	.08	.08	.00
2	.79	.72	.66	.61	.67	.61	.57	.53	.42	.39	.37	.24	.23	.22	.08	.07	.07	.07	.07	.07	.00
3	.72	.63	.56	.51	.61	.54	.48	.44	.37	.34	.31	.21	.20	.18	.07	.06	.06	.06	.06	.06	.00
4	.65	.55	.48	.43	.55	.48	.42	.37	.33	.29	.26	.19	.17	.15	.06	.06	.06	.05	.05	.05	.00
5	.60	.49	.42	.36	.51	.42	.36	.32	.29	.25	.22	.17	.15	.13	.05	.05	.05	.04	.04	.04	.00
6	.55	.44	.37	.31	.47	.38	.32	.27	.26	.22	.19	.15	.13	.12	.05	.04	.04	.04	.04	.04	.00
7	.51	.40	.32	.27	.43	.34	.28	.24	.24	.20	.17	.14	.12	.10	.04	.04	.04	.03	.03	.03	.00
8	.47	.36	.29	.24	.40	.31	.25	.21	.21	.18	.15	.12	.10	.09	.04	.03	.03	.03	.03	.03	.00
9	.44	.33	.26	.22	.37	.28	.23	.19	.20	.16	.13	.11	.09	.08	.04	.03	.03	.03	.03	.03	.00
10	.41	.30	.24	.19	.35	.26	.20	.17	.18	.14	.12	.10	.09	.07	.03	.03	.03	.02	.02	.02	.00

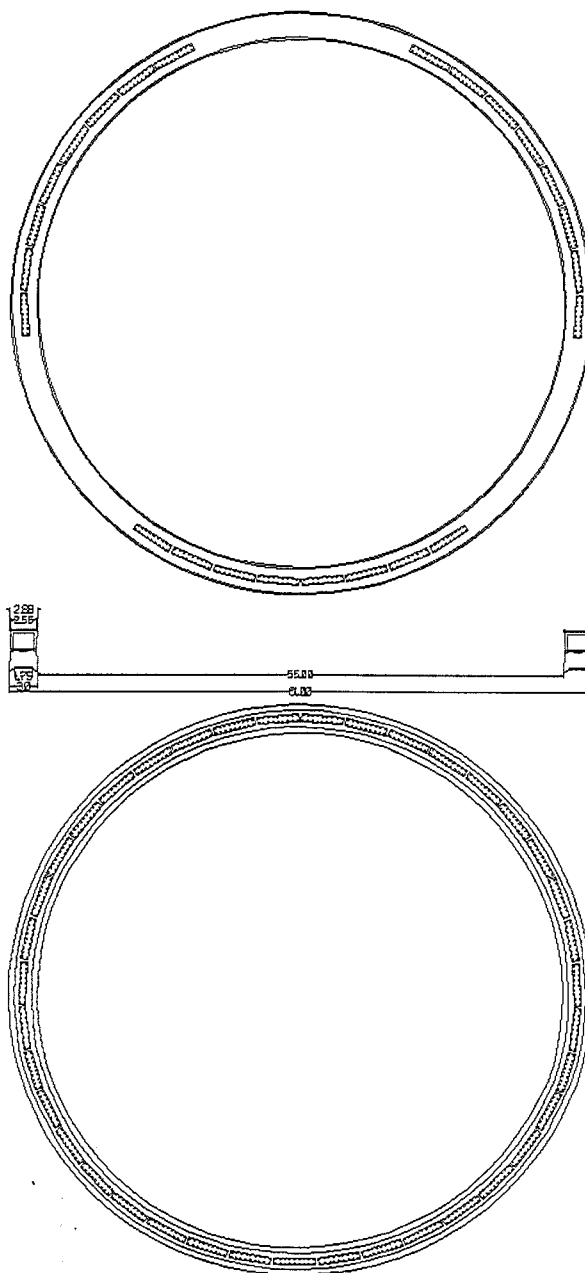
TESTED IN ACCORDANCE WITH CURRENT IES PROCEDURES

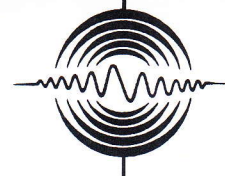
BALLABS CERTIFIED TEST REPORT NO.: 20777.0 DATE 04/01/19
PREPARED FOR: IMPACT ARCHITECTURAL LIGHTING - SAINT LOUIS, MO
DESCRIPTION: 24-18 LED 4.4"ARRAYS (TOP) w/CLEAR 3 PIECE .125"LENS
61"DIA WHITE ALUM PENDANT RING LUMINAIRE-TOP DISTRIBUTION
2- AC ELECTRONICS #AC50CD1.4APC7 @575mA
CATALOG NBR: P7460-NDL-40HI
LAMP TYPE : LM-4.4-40K-80-54V

ELECTRICAL CHARACTERISTICS 120.02V .5470A 65.5500W

LUMINOUS EFFICACY (LUMENS / WATTS) = 134.7

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

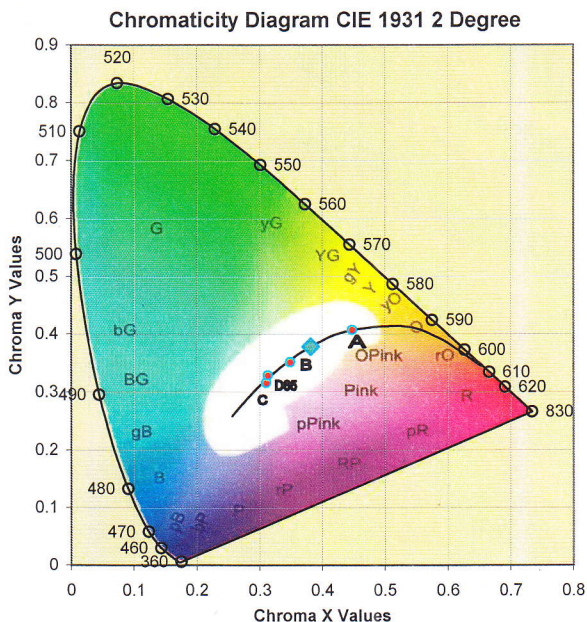




BALLABS CERTIFIED TEST REPORT NO.: 20777.0 A DATE 04/01/19
PREPARED FOR: IMPACT ARCHITECTURAL LIGHTING - SAINT LOUIS, MO
DESCRIPTION: 24-18 LED 4.4"ARRAYS(TOP) w/CLEAR 3 PIECE .125"LENS
61"DIA WHITE ALUM PENDANT RING LUMINAIRE-TOP DISTRIBUTION
2- AC ELECTRONICS #AC50CD1.4APC7 @575mA
CATALOG NBR: P7460-NDL-40HI
LAMP TYPE : LM-4.4-40K-80-54V

INPUT VOLTAGE (V)	120.02
INPUT CURRENT (A)	0.5470
INPUT WATTS (W)	65.5500
POWER FACTOR	0.9984
THD _v (%)	0.169
THD _i (%)	2.396
LUMINOUS EFFICACY-LPW	134.7
LUMINOUS FLUX- LUMENS	8831
CHROMA x	0.3813
CHROMA y	0.3785
CHROMA u	0.2250
CHROMA v	0.5025
DELTA uv (Duv)	0.0006
CORR COLOR TEMP (K)	3991
COLOR REND INDEX (RA)	84.03
COLOR REND INDEX (R9)	11.2

Wavelength (nm)	Spectral Flux mW/nm	Wavelength (nm)	Spectral Flux mW/nm
350	0.9373	610	146.3614
360	1.2507	620	133.4163
370	1.2529	630	116.6160
380	1.1906	640	97.5417
390	1.1902	650	78.8769
400	1.4781	660	61.8921
410	2.6249	670	47.3979
420	7.7056	680	35.9497
430	23.3922	690	26.7656
440	64.2392	700	19.8051
450	155.0794	710	14.6112
460	108.0977	720	10.7939
470	70.3344	730	7.8968
480	53.2036	740	5.7517
490	62.0378	750	4.2409
500	78.4423	760	3.1800
510	90.8948	770	2.3306
520	98.7804	780	1.7858
530	105.2896	790	1.3016
540	113.5941	800	1.0029
550	121.4773	810	0.7797
560	130.8019	820	0.5981
570	139.6098	830	0.4794
580	147.8327	840	0.3935
590	152.7807	850	0.2758
600	152.9091		

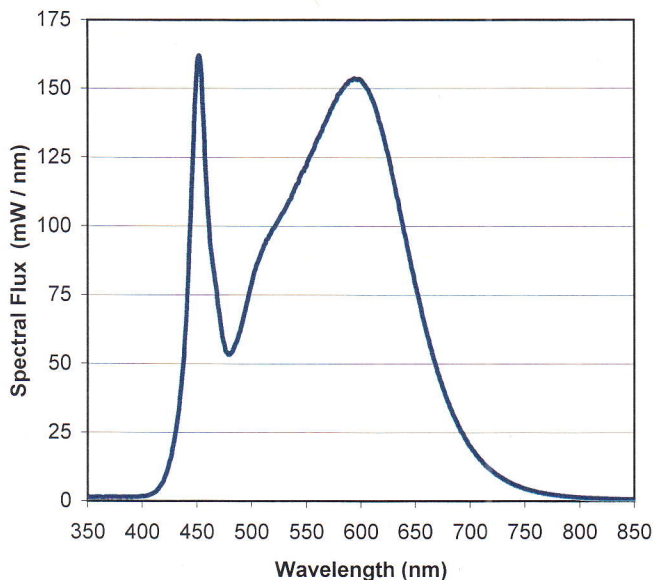


Data collected per LM79-08 using a Labsphere integrating sphere and 2100 spectroradiometer. Calibration of the spectroradiometer-sphere is traceable to the National Institute of Standards and Technology.



NVLAP LAB CODE 200921-0

[Signature]
Kelly C Lerbs
Vice President



THIS BALLABS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THIS CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.