BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC.

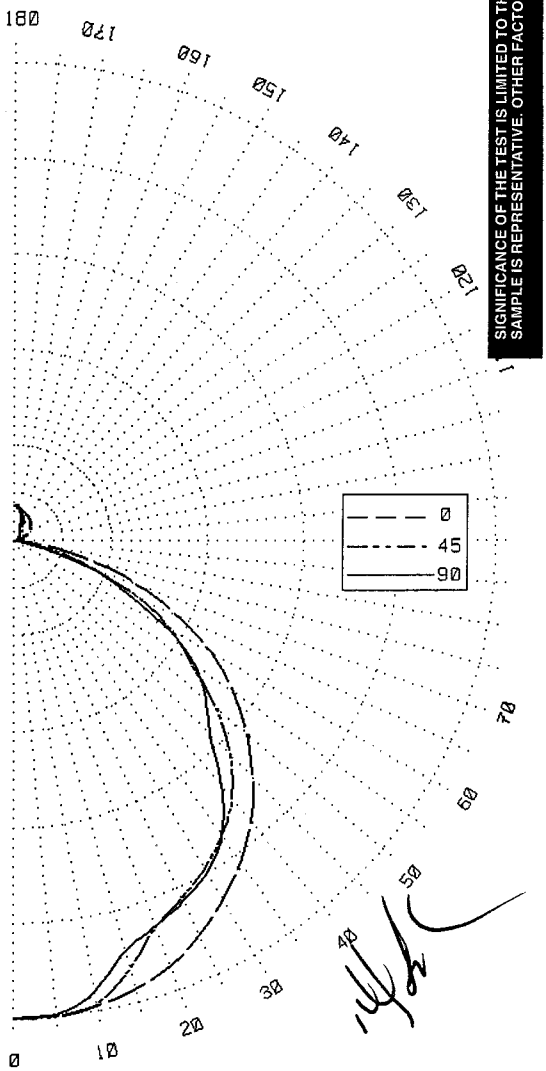
1618 HEADLAND DR.
FENTON, MO 63026
(636) 343-6006
(636) 343-6051 FAX

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.: 19522.0 DATE 09/26/17
PREPARED FOR: H.E. WILLIAMS, INC - CARTHAGE, MO
DESCRIPTION: 4-192 LED 22"ARRAYS EACH ON ALUM HEATSINK 24x19"HIGHBAY LUMINAIRE w/NO DIFFUSERS & WHITE UPLIGHT REFLS, CENTER DRIVER HOUSING 4ADVANCE #XI095C275V054DNF1-18K RESISTORS
CATALOG NBR: GP4-L440/850-W-U-6CPI/5-15P WHITE-DRV-120
LAMP TYPE : D5638D192C2560A8N50JRB

CANDLEPOWER DISTRIBUTION

VERT ANG	HORIZONTAL ANGLE 0	22.5	45	67.5	90	ZONAL LUMENS
0	16410.	16410.	16410.	16410.	16410.	
5	16370.	16413.	16410.	16345.	16341.	1563.6
10	16205.	16273.	16174.	15842.	15722.	
15	15917.	15948.	15226.	14676.	14573.	4329.7
20	15504.	15365.	14107.	14065.	14044.	
25	14938.	14484.	13525.	13646.	13639.	6473.4
30	14225.	13337.	12970.	13146.	13135.	
35	13444.	12317.	12339.	12528.	12351.	7865.3
40	12570.	11456.	11571.	11360.	11020.	
45	11523.	10481.	10420.	9940.	9467.	8003.3
50	10362.	9388.	8998.	8492.	8523.	
55	9116.	8251.	7333.	7527.	7552.	7052.7
60	7741.	7002.	6188.	6085.	5965.	
65	6185.	5364.	4812.	4222.	4227.	4864.8
70	4602.	3590.	3026.	2905.	2864.	
75	2966.	2218.	1737.	1256.	1088.	1914.1
80	1374.	930.	473.	346.	364.	
85	333.	165.	153.	155.	165.	196.9
90	15.	7.	6.	3.	11.	
95	18.	21.	16.	15.	15.	18.7
100	83.	52.	55.	48.	51.	
105	188.	78.	97.	101.	104.	111.6
110	301.	119.	117.	137.	146.	
115	420.	156.	134.	152.	161.	181.5
120	528.	199.	163.	169.	175.	
125	632.	267.	197.	191.	191.	239.3
130	725.	359.	223.	224.	224.	
135	795.	462.	260.	252.	258.	290.6
140	856.	625.	321.	276.	277.	
145	911.	741.	422.	319.	310.	328.6
150	957.	849.	525.	406.	367.	
155	994.	909.	742.	537.	488.	339.0
160	1026.	996.	885.	783.	641.	
165	1079.	1058.	1009.	921.	931.	283.0
170	1156.	1103.	1110.	997.	1026.	
175	1223.	1177.	1138.	1139.	1165.	110.9
180	1228.	1228.	1228.	1228.	1228.	



NVLAP TESTING

NVLAP LAB CODE 200921-0

LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT	ZONE	LUMENS	%LAMP	%FIXT
0- 30	12367.	NA.	28.0	90-120	312.	NA.	.7
0- 40	20232.	NA.	45.8	90-130	551.	NA.	1.2
0- 60	35288.	NA.	79.9	90-150	1170.	NA.	2.6
0- 90	42264.	NA.	95.7	90-180	1903.	NA.	4.3
TOTAL LUMINAIRE =				0-180	44167.	NA.	100.0

IES SPACING CRITERIA: END= 1.3 DIAGONAL = 1.2 CROSS= 1.2

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.

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LUMINANCES-CD/SQ-M
HORIZONTAL ANGLE

VERT ANGLE	0	45	90
45	58633.	53020.	48173.
55	57180.	45995.	47372.
65	52658.	40965.	35985.
75	41238.	24142.	15130.
85	13731.	6305.	6819.

MAXIMUM BRIGHTNESSES NOT MEASURED

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ZONAL CAVITY COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE=.20

CEILING	.80				.70				.50				.30				.10	.00
WALL RCR	.70	.50	.30	.10	.70	.50	.30	.10	.50	.30	.10	.50	.30	.10	.50	.30	.10	.00
0	1.18	1.18	1.18	1.18	1.15	1.15	1.15	1.15	1.09	1.09	1.09	1.03	1.03	1.03	.98	.98	.98	.96
1	1.09	1.05	1.02	.98	1.06	1.03	.99	.96	.98	.95	.93	.93	.91	.89	.89	.87	.86	.83
2	1.01	.94	.88	.82	.98	.91	.86	.81	.87	.83	.79	.83	.80	.76	.80	.77	.74	.72
3	.93	.83	.76	.70	.90	.81	.75	.69	.78	.72	.68	.75	.70	.66	.72	.68	.64	.62
4	.85	.74	.66	.60	.83	.73	.65	.59	.70	.63	.58	.67	.61	.57	.64	.60	.56	.54
5	.78	.66	.57	.51	.75	.64	.56	.51	.62	.55	.50	.59	.53	.49	.57	.52	.48	.46
6	.72	.59	.50	.44	.69	.58	.50	.44	.55	.48	.43	.53	.47	.42	.52	.46	.42	.40
7	.66	.53	.44	.39	.64	.52	.44	.38	.50	.43	.38	.48	.42	.37	.46	.41	.37	.35
8	.61	.47	.39	.33	.59	.47	.39	.33	.45	.38	.33	.43	.37	.32	.42	.36	.32	.30
9	.56	.42	.34	.29	.54	.42	.34	.29	.40	.33	.28	.39	.32	.28	.37	.32	.28	.26
10	.52	.39	.31	.26	.50	.38	.30	.25	.37	.30	.25	.35	.29	.25	.34	.28	.24	.23

TESTED IN ACCORDANCE WITH CURRENT IES PROCEDURES

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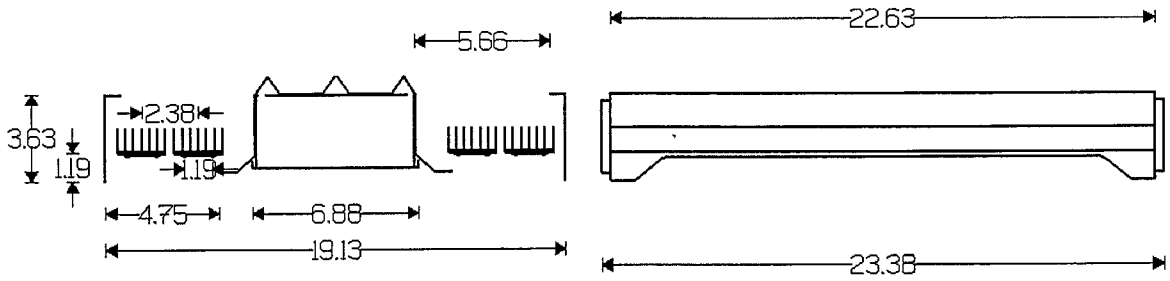
ELECTRICAL CHARACTERISTICS 120.0V 3.1649A 375.660W

LUMINOUS EFFICACY (LUMENS / WATTS) = 117.6

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