



UL Verification Services Inc.  
7036 Snowdrift Road  
Allentown, PA 18106  
610-774-1300



## Indoor Distribution Test Report

Relevant Standards  
IES LM-79-2008, ANSI C82.77-10-2014

**Prepared For**  
**H E Williams Inc**  
831 W FairView Ave  
PO Box 837  
Carthage, MO 64836-0837  
United States

**Catalog Number**  
**MX2U-4-L8/835-FW**  
Order Number  
13052732  
Test Number  
13052732.23

Test Date

2020-04-02

Prepared By

Cordaryl Cousar, Technician

Approved By

Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.  
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**Luminaire Description:** Formed White aluminum housing,frosted lens enclosure  
**Lamp:** 144 White LEDs  
**Mounting:** Pendant  
**Ballast/Driver:** One Philips XI040C110V054BST1 Driver

#### Luminaire



#### Luminaire Characteristics

Luminous Length: 48.00 in.  
Luminous Width: 2.000 in.

#### Summary of Results

Total Luminaire Output: 3043 Lumens  
Luminaire Efficacy: 126.6 lm/w  
Maximum Candela: 1053 Candela

#### Test Conditions

Test Temperature: 24.7 °C  
Voltage: 120.0 VAC  
Current: 0.2020 A  
Power: 24.04 W  
Power Factor: 0.992  
Frequency: 60 Hz  
Current THD: 10.7 %

Laboratory results may not be representative of field performance  
Ballast factors have not been applied



## Distribution - Goniophotometer

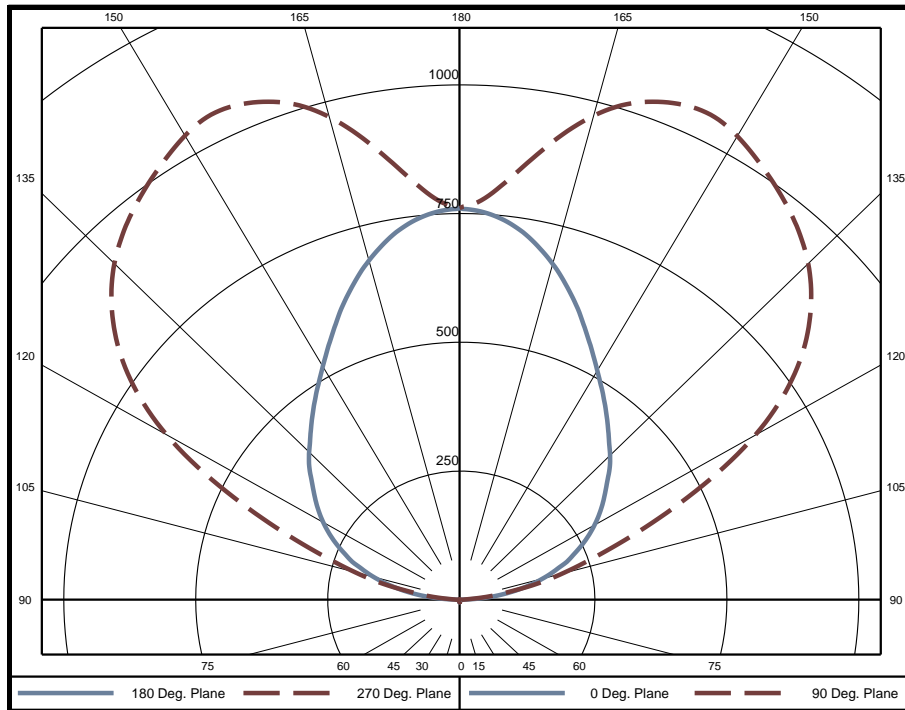
### Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.0 VAC	0.2020 A	24.04 W	0.992	60 Hz	10.7 %

### Summary of Results

<b>Total Lumen Output:</b>	3043 Lumens
<b>Luminaire Efficacy:</b>	126.6 lm/w
<b>Maximum Candela:</b>	1053 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0	0.0%	60-65	0	0.0%	120-125	265.1	8.7%
5-10	0	0.0%	65-70	0	0.0%	125-130	283.2	9.3%
10-15	0	0.0%	70-75	0	0.0%	130-135	289.1	9.5%
15-20	0	0.0%	75-80	0	0.0%	135-140	283.6	9.3%
20-25	0	0.0%	80-85	0	0.0%	140-145	269.0	8.8%
25-30	0	0.0%	85-90	0	0.0%	145-150	247.1	8.1%
30-35	0	0.0%	90-95	11.5	0.4%	150-155	218.0	7.2%
35-40	0	0.0%	95-100	43.6	1.4%	155-160	181.8	6.0%
40-45	0	0.0%	100-105	86.7	2.8%	160-165	140.9	4.6%
45-50	0	0.0%	105-110	133.7	4.4%	165-170	98.1	3.2%
50-55	0	0.0%	110-115	184.6	6.1%	170-175	56.6	1.9%
55-60	0	0.0%	115-120	231.6	7.6%	175-180	18.4	0.6%

Zone	Lumens	% of Luminaire
0-40	0	0.0%
0-60	0	0.0%
0-90	0	0.0%
90-180	3043	100.0%



**Candela Tabulation**  
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90	4	7	6	7	7	7	6	7	4	7	6	7	7	6	7
	95	56	52	46	41	35	41	46	52	56	52	46	41	35	41	46
	100	113	125	125	115	107	115	125	125	113	125	125	115	107	115	125
	105	165	197	235	211	203	211	235	197	165	197	235	211	203	211	235
	110	215	267	367	336	316	336	367	267	215	267	367	336	316	336	367
	115	256	337	493	494	472	494	493	337	256	337	493	494	472	494	493
	120	295	404	602	643	638	643	602	404	295	404	602	643	638	643	602
	125	330	469	695	750	766	750	695	469	330	469	695	750	766	750	695
	130	364	530	770	833	856	833	770	530	364	530	770	833	856	833	770
	135	401	579	834	897	923	897	834	579	401	579	834	897	923	897	834
	140	435	625	879	945	970	945	879	625	435	625	879	945	970	945	879
	145	474	663	909	984	1007	984	909	663	474	663	909	984	1007	984	909
	150	517	691	927	1015	1040	1015	927	691	517	691	927	1015	1040	1015	927
	155	568	712	923	1022	1052	1022	923	712	568	712	923	1022	1052	1022	923
	160	624	729	901	999	1029	999	901	729	624	729	901	999	1029	999	901
	165	676	741	860	942	974	942	860	741	676	741	860	942	974	942	860
	170	720	750	813	864	886	864	813	750	720	750	813	864	886	864	813
	175	749	757	775	791	800	791	775	757	749	757	775	791	800	791	775
	180	761	761	761	761	761	761	761	761	761	761	761	761	761	761	761



### Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																		
Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as percent of total lumen output delivered to the task surface **																	
0	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	57	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

Up Light Beam and Field Information	
CIE Type:	Indirect
Center Beam Intensity:	761 Candela
Central Cone Intensity:	765 Candela
Beam Flux:	3042.7 Lumens
Beam Angle (0-180):	95.9 Degrees
Beam Angle (90-270):	135.6 Degrees
Field Angle (0-180):	166.5 Degrees
Field Angle (90-270):	164.0 Degrees