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Photometric Test Report

Relevant Standards

IES LM-79-2008, ANSI C82.77-10-2014, CIE 13.3-1995
CIE 15-2004, ANSI C78.377-2017, IES TM-30-2018

Prepared For

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Catalog Number

MX2U-4-L8/835-G

Order Number

13052732

Test Number

13052732.14

Test Date

2019-10-11 - 2019-10-14

Prepared By

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Approved By

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The results contained in this report pertain only to the tested sample.
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Table of Contents

Summary of Results	Page 3
Integrating Sphere Results	Page 4
Distribution Results	
Conditions / Summary of Results / Polar Plot / Zonal Lumens	Page 5
Candela Tabulation / Average Luminance	Page 6
Coefficients of Utilization / Cone of Light	Page 7

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

Testing was performed in a 2-meter integrating sphere using the 4π geometry method.
Absorption correction was employed for Sphere measurement



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.
Luminous Height: 0.25 in.

Summary of Results

Integrating Sphere

Luminous Flux: 3148 Lumens
Efficacy: 131.11 lm/w
CCT: 3441 K
CRI (Ra): 82.7

Distribution

Total Luminaire Output: 3017 Lumens
Luminaire Efficacy: 125.7 lm/w
Maximum Candela: 1058 Candela

Electrical Data at 120 VAC

Test Temperature: 25.8 °C
Voltage: 120.2 VAC
Current: 0.2015 A
Power: 24.01 W
Power Factor: 0.992
Frequency: 60 Hz
Current THD: 10.7 %



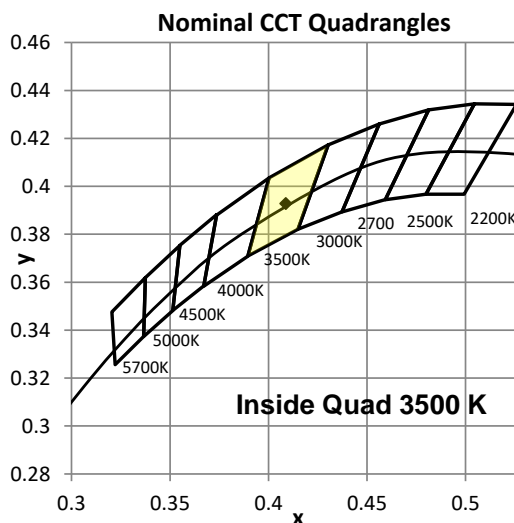
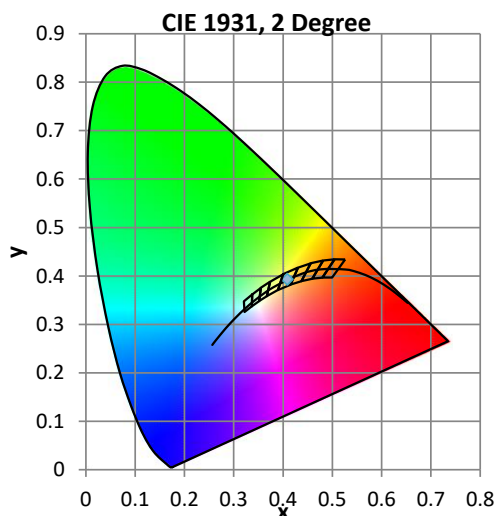
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.8 °C	120.2 VAC	0.2015 A	24.01 W	0.992	60 Hz	10.7 %

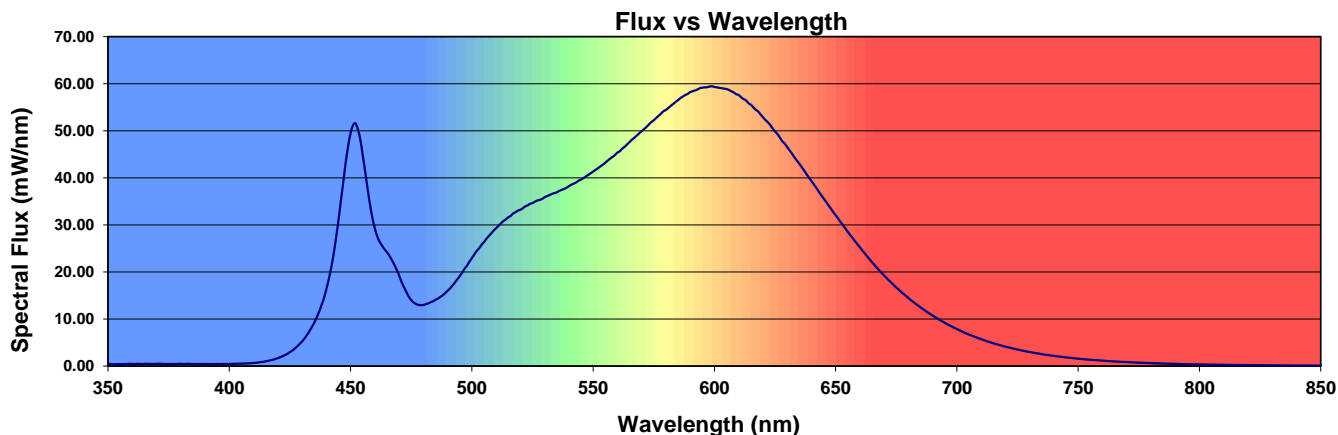
Summary of Results

Total Output:	3148 Lumens	Chromaticity (x):	0.4087
Efficacy:	131.1 lm/w	Chromaticity (y):	0.3929
CCT:	3441 K	Chromaticity (u'):	0.2370
CRI (Ra):	82.7	Chromaticity (v'):	0.5127
CRI (R9):	6.3	TM-30 Rf:	84.2
Peak Wavelength:	599 nm	TM-30 Rg:	95.3
Dominant Wavelength:	581 nm	Duv:	0.0001
S/P Ratio:	1.51		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.7	81.0	90.1	96.3	81.1	81.1	86.9	84.2	61.1	6.3	77.0	80.4	64.8	83.3	98.4	74.0





Distribution - Goniophotometer

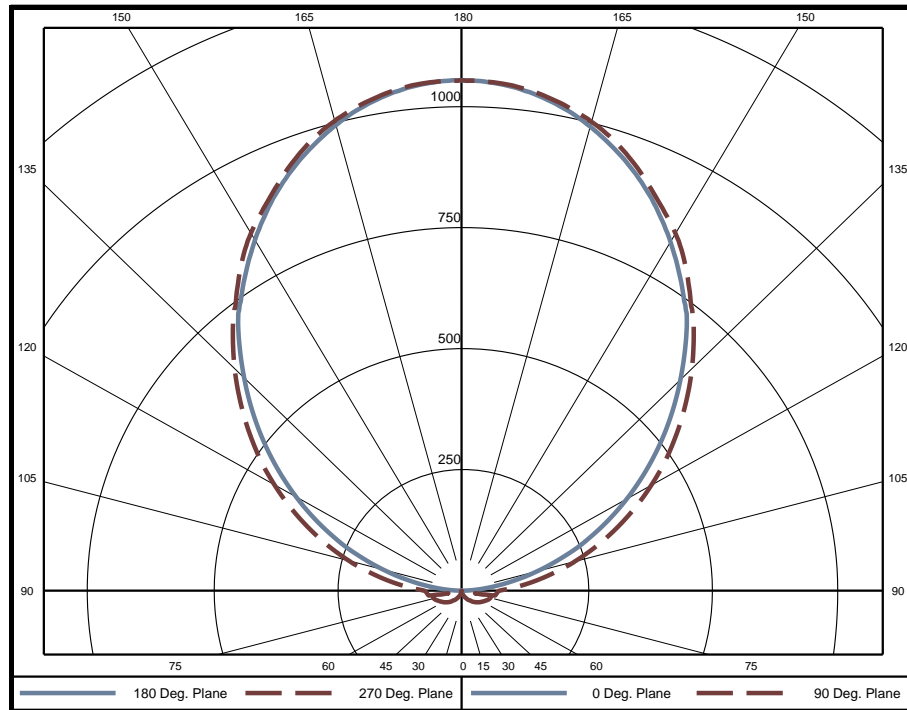
Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.6 °C	120.0 VAC	0.2015 A	23.99 W	0.992	60 Hz	10.8 %

Summary of Results

Total Lumen Output:	3017 Lumens
Luminaire Efficacy:	125.7 lm/w
Maximum Candela:	1058 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.0	0.0%	60-65	12.9	0.4%	120-125	209.1	6.9%
5-10	0.2	0.0%	65-70	14.8	0.5%	125-130	229.1	7.6%
10-15	0.4	0.0%	70-75	16.7	0.6%	130-135	243.2	8.1%
15-20	0.8	0.0%	75-80	15.4	0.5%	135-140	250.4	8.3%
20-25	1.4	0.0%	80-85	19.8	0.7%	140-145	249.2	8.3%
25-30	2.2	0.1%	85-90	23.1	0.8%	145-150	239.7	7.9%
30-35	3.3	0.1%	90-95	34.9	1.2%	150-155	221.5	7.3%
35-40	4.5	0.1%	95-100	60.6	2.0%	155-160	195.3	6.5%
40-45	5.9	0.2%	100-105	91.0	3.0%	160-165	161.4	5.3%
45-50	7.6	0.3%	105-110	123.3	4.1%	165-170	120.5	4.0%
50-55	9.3	0.3%	110-115	155.1	5.1%	170-175	74.4	2.5%
55-60	11.1	0.4%	115-120	184.1	6.1%	175-180	25.2	0.8%

Zone	Lumens	% of Luminaire
0-40	13	0.4%
0-60	47	1.5%
0-90	149	5.0%
90-180	2868	95.1%



Candela Tabulation
Horizontal 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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2
10	1	2	3	4	4	4	3	2	1	2	3	4	4	4	3	2
15	0	2	4	6	7	6	4	2	0	2	4	6	7	6	4	2
20	0	2	6	10	11	10	6	2	0	2	6	10	11	10	6	2
25	0	2	8	13	14	13	8	2	0	2	8	13	14	13	8	2
30	0	3	10	16	18	16	10	3	0	3	10	16	18	16	10	3
35	0	4	13	21	23	21	13	4	0	4	13	21	23	21	13	4
40	0	5	16	24	27	24	16	5	0	5	16	24	27	24	16	5
45	0	7	18	29	33	29	18	7	0	7	18	29	33	29	18	7
50	0	8	21	33	37	33	21	8	0	8	21	33	37	33	21	8
55	0	9	24	37	42	37	24	9	0	9	24	37	42	37	24	9
60	0	11	27	41	46	41	27	11	0	11	27	41	46	41	27	11
65	0	12	30	44	51	44	30	12	0	12	30	44	51	44	30	12
70	0	14	33	48	56	48	33	14	0	14	33	48	56	48	33	14
75	0	15	37	51	60	51	37	15	0	15	37	51	60	51	37	15
80	0	16	35	41	46	41	35	16	0	16	35	41	46	41	35	16
85	0	20	45	64	70	64	45	20	0	20	45	64	70	64	45	20
90	0	22	49	69	76	69	49	22	0	22	49	69	76	69	49	22
95	39	61	91	112	120	112	91	61	39	61	91	112	120	112	91	61
100	91	114	144	166	174	166	144	114	91	114	144	166	174	166	144	114
105	157	178	206	228	235	228	206	178	157	178	206	228	235	228	206	178
110	229	251	274	295	301	295	274	251	229	251	274	295	301	295	274	251
115	303	323	346	365	369	365	346	323	303	323	346	365	369	365	346	323
120	379	399	418	436	440	436	418	399	379	399	418	436	440	436	418	399
125	457	476	492	507	511	507	492	476	457	476	492	507	511	507	492	476
130	536	553	569	579	581	579	569	553	536	553	569	579	581	579	569	553
135	615	631	642	651	652	651	642	631	615	631	642	651	652	651	642	631
140	696	711	715	722	722	722	715	711	696	711	715	722	722	722	715	711
145	765	777	782	789	789	789	782	777	765	777	782	789	789	789	782	777
150	831	843	846	854	854	854	846	843	831	843	846	854	854	854	846	843
155	894	904	906	909	907	909	906	904	894	904	906	909	907	909	906	904
160	947	956	957	963	961	963	957	956	947	956	957	963	961	963	957	956
165	992	1001	999	1004	1003	1004	999	1001	992	1001	999	1004	1003	1004	999	1001
170	1026	1033	1029	1033	1032	1033	1029	1033	1026	1033	1029	1033	1032	1033	1029	1033
175	1047	1052	1047	1050	1050	1050	1047	1052	1047	1052	1047	1050	1050	1050	1047	1052
180	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055	1055



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	96	96	96	96	83	83	83	83	58	58	58	36	36	36	15	15	15	5
1	87	83	79	75	75	71	68	65	50	48	46	30	29	28	12	11	11	3
2	79	72	66	61	68	62	57	53	43	40	37	26	24	23	10	9	9	2
3	72	63	56	50	61	54	48	44	38	34	31	23	21	19	9	8	7	1
4	65	55	48	42	56	48	41	37	33	29	26	20	18	16	8	7	6	1
5	60	49	41	35	51	42	36	31	29	25	22	18	15	13	7	6	5	1
6	55	43	36	30	47	37	31	26	26	22	19	16	13	12	6	5	4	1
7	50	39	31	26	43	34	27	23	24	19	16	14	12	10	5	4	4	0
8	46	35	28	23	40	30	24	20	21	17	14	13	10	9	5	4	3	0
9	43	32	25	20	37	27	21	17	19	15	12	12	9	8	4	3	3	0
10	40	29	22	17	34	25	19	15	18	14	11	11	8	7	4	3	2	0

Up Light Beam and Field Information	
CIE Type:	Indirect
Center Beam Intensity:	1055 Candela
Central Cone Intensity:	1053 Candela
Beam Flux:	2868.3 Lumens
Beam Angle (0-180):	101.1 Degrees
Beam Angle (90-270):	107.6 Degrees
Field Angle (0-180):	157.7 Degrees
Field Angle (90-270):	173.0 Degrees