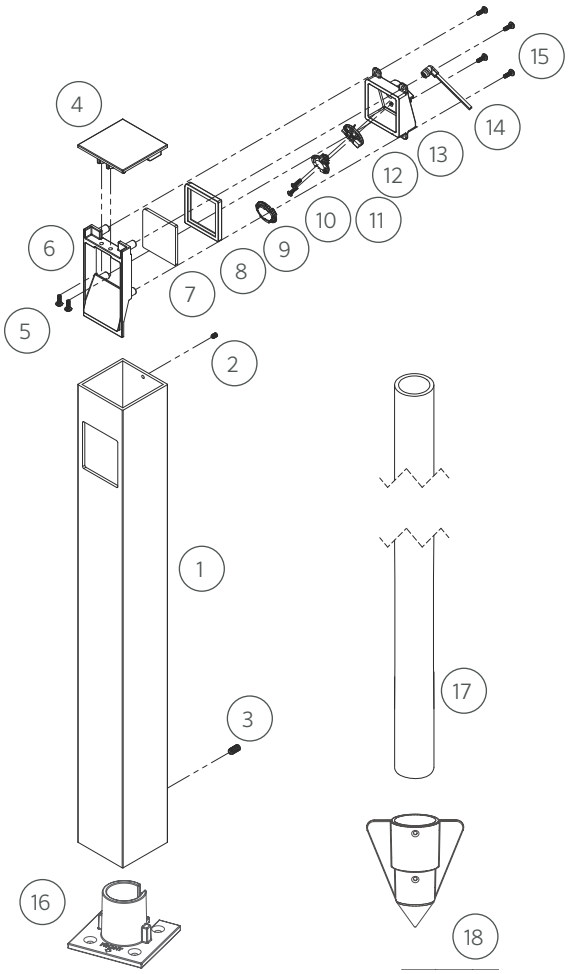
Replacement Parts

ITEM	DESCRIPTION	PART #
1	Riser	†
2	Screw, #8-32 x ¼"	250028560000
3	Setscrew, ¼"-20 x ½"	250028060000
4	Cap	†
5	Screw, #6-32 x ⅜"	250028400000
2, 4-5	Cap Assembly	MPZCPXX*
6	Faceplate	†
5-6	Faceplate Assembly	MPZFPXX*
7	Lens	250028650000
8	Gasket	250028680000
9	Beam Angle Lens	See LED Chart
10	Screw	See LED Chart
11	Reflector	See LED Chart
12	LED Board	See LED Chart
13	LED Housing	†
14	Socket, 10' (3 m)	†
15	Screw, #6-32 x ⅜"	250028400000
16	Deck Mount	MPZDMXX*
17	Conduit Stake, 1" (25 mm)	MPL-COND-30
18	Conduit Stabilizer	†
17-18	Conduit and Stabilizer Kit	CSKITMPL
NS	Hex Key, 5⁄64"	250010330000
NS	Hex Key, ⅛"	250013580000

NS = Not shown
**XX = Finish code*
† = This part is not serviceable. Contact Customer Support or a local distributor to order a replacement product.



2nd Gen LED Chart

DESCRIPTION	PART #
LED Replacement Kits (Board, Reflector, Screws, Beam Angle Lenses)	
1 LED Up Light Kit (2700K)	KIT1LEDRDW
3 LED Up Light Kit (2700K)	KIT3LEDRDW
ZD 1 LED Up Light Kit (2700K)	KITZD1LEDRDW
ZD 3 LED Up Light Kit (2700K)	KITZD3LEDRDW
ZDC 3 LED Kit, Medium	ZDCKITM
Reflectors	
1 LED Reflector	770000
3 LED Reflector	770700
ZDC 3 LED Reflector, Medium	250022050000
Screws	
1 LED/3 LED Screw, #4-40 x ⅜" (Qty Req: 2)	762400

Beam Angle Lens Chart

DESCRIPTION	PART #
Round Beam Angle Lenses	
1 LED Spot Lens (20°)	770600
1 LED Flood Lens (35°)	1LEDFLLENS
1 LED Wide Flood Lens (60°)	1LEDWFLLENS
3 LED Spot Lens (20°)	771300
3 LED Flood Lens (35°)	3LEDFLLENS
3 LED Wide Flood Lens (60°)	3LEDWFLLENS

1st Gen LED Chart

DESCRIPTION	PART #
LED Replacement Kits (Board, Color Filters, Reflector, Screws)	
1 LED Up Light Kit (3900K)	1LEDULKIT
3 LED Up Light Kit (3900K)	3LEDULKIT
ZD 1 LED Up Light Kit (3900K)	ZD1LEDULKIT
ZD 3 LED Up Light Kit (3900K)	ZD3LEDULKIT
ZD 3 LED T Up Light Kit (TURTLE)	ZD3LEDTKIT
Color Filter Lenses Only	
1 LED Color Filter, Amber	770100
1 LED Color Filter, Blue	770101
1 LED Color Filter, Green	770102
3 LED Color Filter, Amber	770800
3 LED Color Filter, Blue	770801
3 LED Color Filter, Green	770802
Optics Kits (Color Filters, Reflector, Screws)	
1 LED Optics Kit	1LEDOPTICSKIT
3 LED Optics Kit	3LEDOPTICSKIT

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NVLAP TESTING
NVLAP LAB CODE 200927-0

Report No: L092212801 **Issue Date: 10/10/2022**

Report Prepared For: FX Luminaire / Lumascape
1940 Diamond Street

Model Number: MPZ-1LED-FW / aRDL6-1LED-WT

Test: Photometric/Colorimetric/Electrical Test

Standards Used: Appropriate part or all test guidelines were used for test performed:

IESNA LM79: 2019 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI NEMA ANSLG C78.377: 2017 Specification of the Chromaticity of Solid State Lighting Products

ANSI C82.77-10:2014: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

Special Test Condition: Fixture is tested with no special conditions.

Date of Tests: 10/7/22

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	4/7/23
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	3/17/23
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

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NVLAP TESTING
NVLAP LAB CODE 200927-0

General Information	
Manufacturer:	FX Luminaire / Lumascape
Model Number:	MPZ-1LED-FW / aRDL6-1LED-WT
Driver Model Number:	N/A

Test Summary	
Total Lumens:	52.00
Efficacy:	28.85
Color Redering Index:	83.5
Correlated Color Temperature:	2681
Input Voltage (VAC/60Hz):	12.02
Input Current (Amp):	0.1771
Input Power (W):	1.80
Input Power Factor:	0.8468
Current ATHD (%):	50.5%

Test Condition	
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:35
Total Operating Time (Hours):	1:15

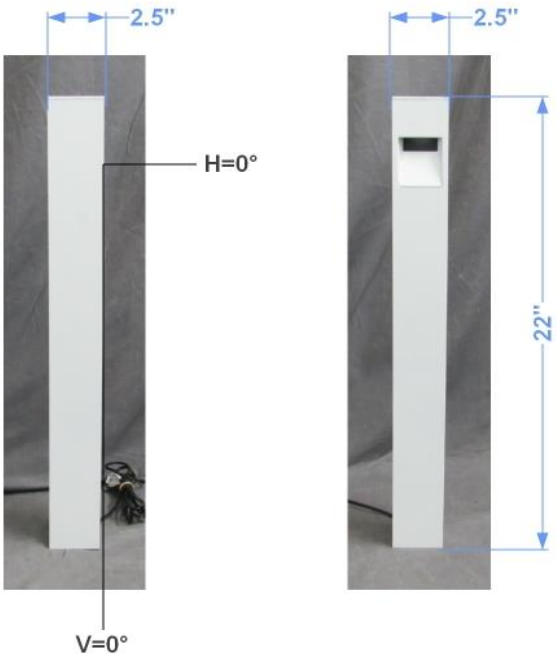


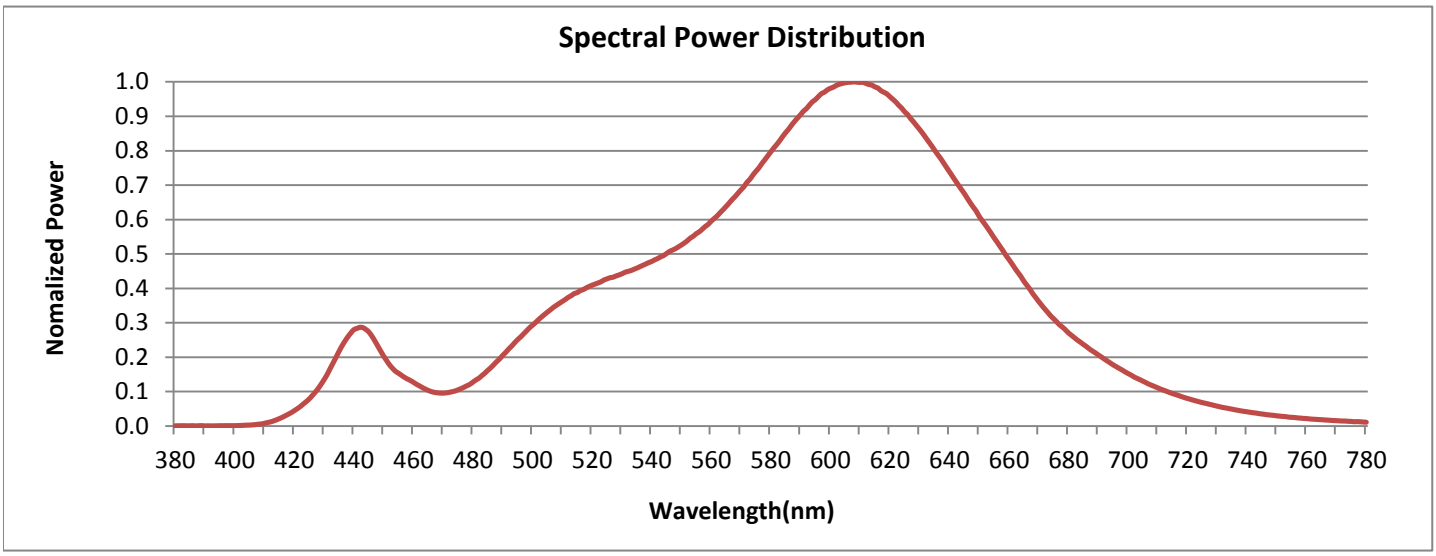
FIG. 1 LUMINAIRE

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Report No: L092212801

NVLAP TESTING
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Colorimetry Test Results

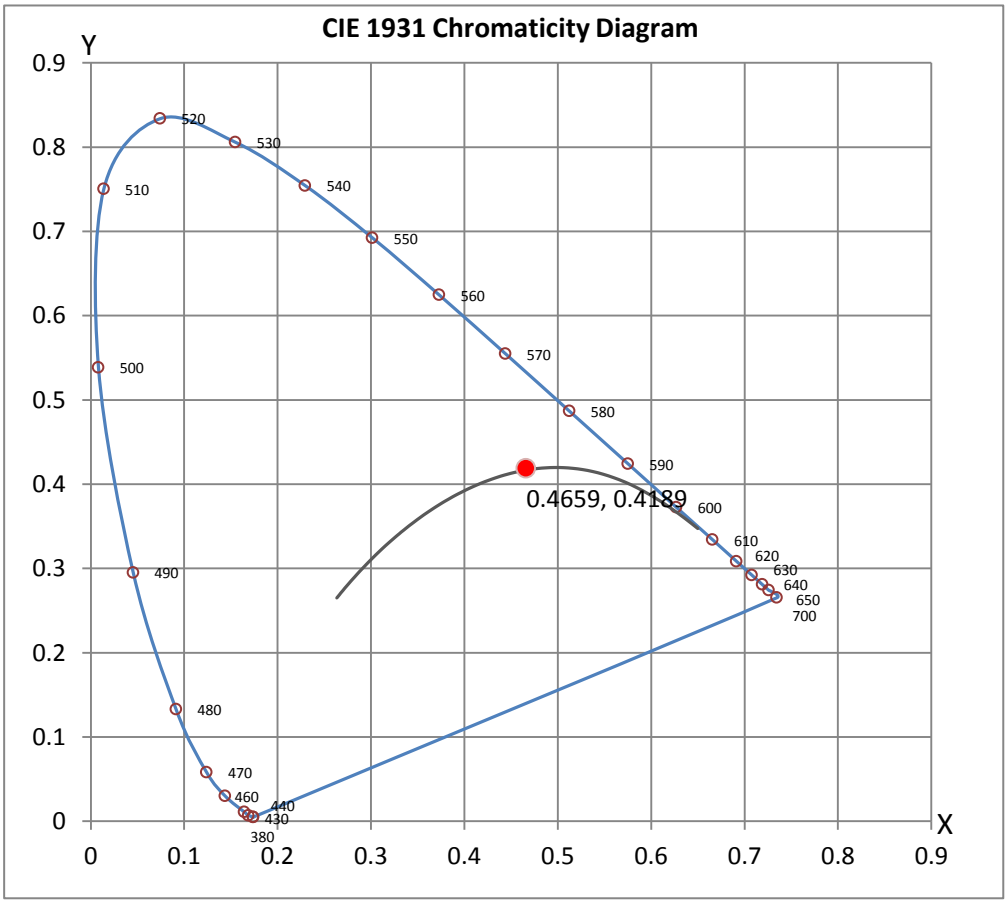


CRI & CCT

x	0.4659
y	0.4189
u'	0.2627
v'	0.5314
CRI	83.50
CCT	2681
Duv	0.00254

R Values

R1	81.23
R2	90.24
R3	97.99
R4	83.91
R5	82.46
R6	90.88
R7	83.00
R8	57.90
R9	7.12
R10	79.39
R11	85.23
R12	79.46
R13	83.04
R14	99.31
R15	72.11



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NVLAP TESTING
NVLAP LAB CODE 200927-0

Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

The results related only to the samples as received and tested. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government.

Report Prepared by : Kunjan Modi

Test Report Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports.*

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www.lightlaboratory.com

Photometric Test Report

IES ROAD REPORT
PHOTOMETRIC FILENAME : L092212801.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L092212801
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 10/7/2022
[MANUFAC] FX Luminaire / Lumascape
[LUMCAT] MPZ-1LED-FW / aRDL6-1LED-WT
[LUMINAIRE] Lumiled, 1LED, 2700K
[BALLASTCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 12VAC
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	52
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	29
Total Luminaire Watts	1.8
Ballast Factor	1.00
Upward Waste Light Ratio	0.08
Maximum Candela	92
Maximum Candela Angle	0H 65V
Maximum Candela (<90 Degrees Vertical)	92
Maximum Candela Angle (<90 Degrees Vertical)	0H 65V
Maximum Candela At 90 Degrees Vertical	10 (19.2% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	43 (82.7% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : L092212801.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

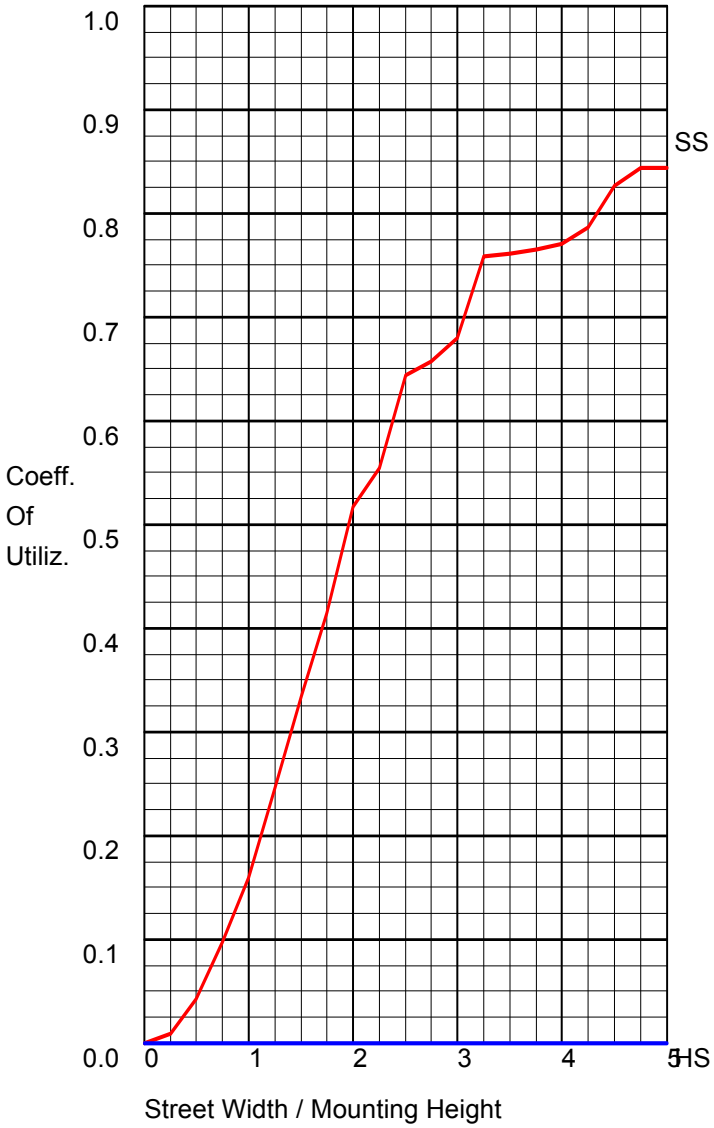
	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1.5	N.A.	2.8
FM - Front-Medium (30-60)	17.3	N.A.	33.0
FH - Front-High (60-80)	24.8	N.A.	47.4
FVH - Front-Very High (80-90)	4.5	N.A.	8.6
BL - Back-Low (0-30)	0.0	N.A.	0.0
BM - Back-Medium (30-60)	0.0	N.A.	0.0
BH - Back-High (60-80)	0.0	N.A.	0.0
BVH - Back-Very High (80-90)	0.0	N.A.	0.0
UL - Uplight-Low (90-100)	1.6	N.A.	3.1
UH - Uplight-High (100-180)	2.7	N.A.	5.1
Total	52.4	N.A.	100.0
BUG Rating	B0-U1-G0		

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IES ROAD REPORT
PHOTOMETRIC FILENAME : L092212801.IES

COEFFICIENTS OF UTILIZATION



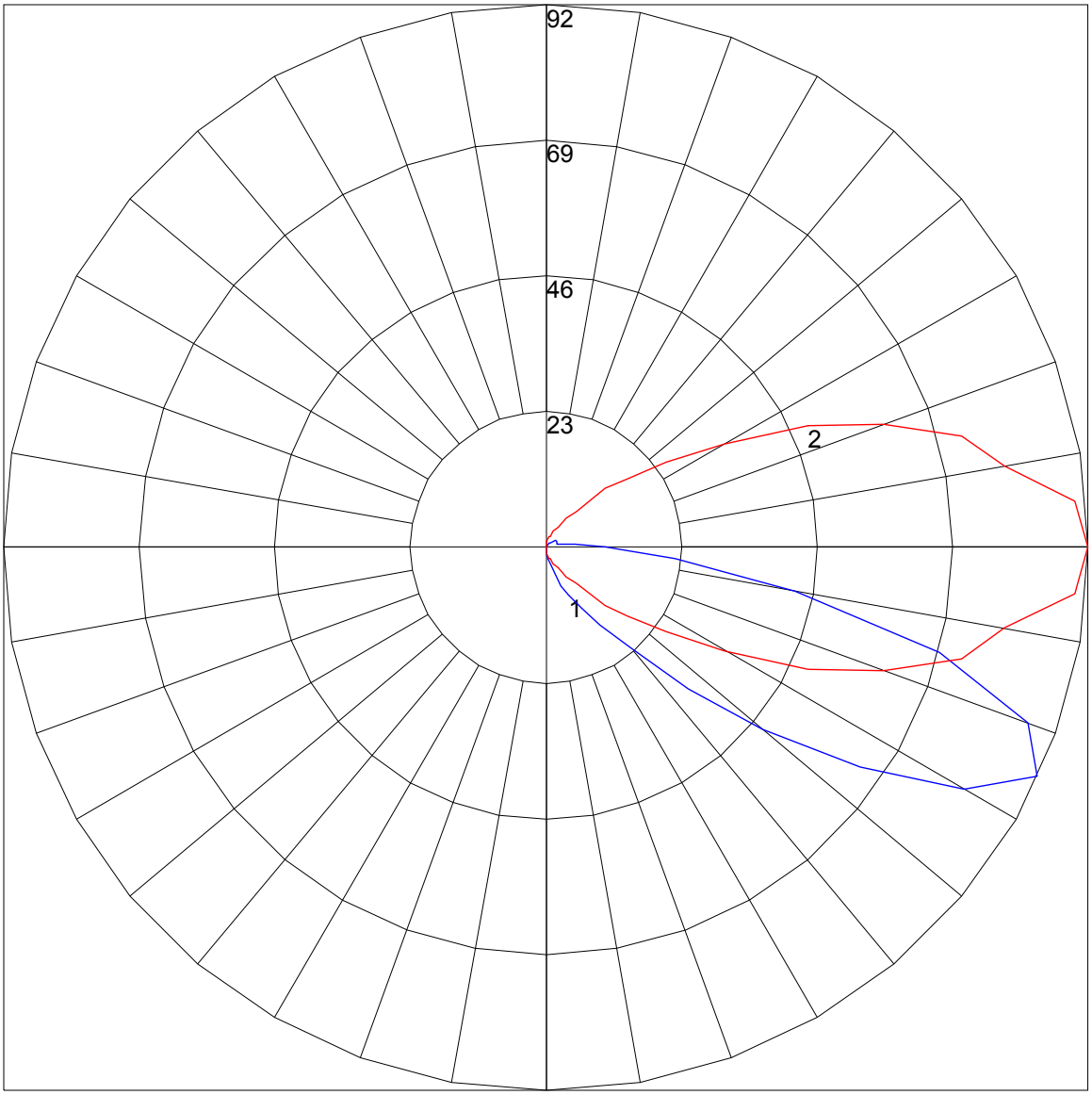
FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	48.1	91.8
Downward House Side	0.0	0.0
Downward Total	48.1	91.7
Upward Street Side	4.3	8.2
Upward House Side	0.0	0.0
Upward Total	4.3	8.2
Total Flux	52.4	99.9

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POLAR GRAPH

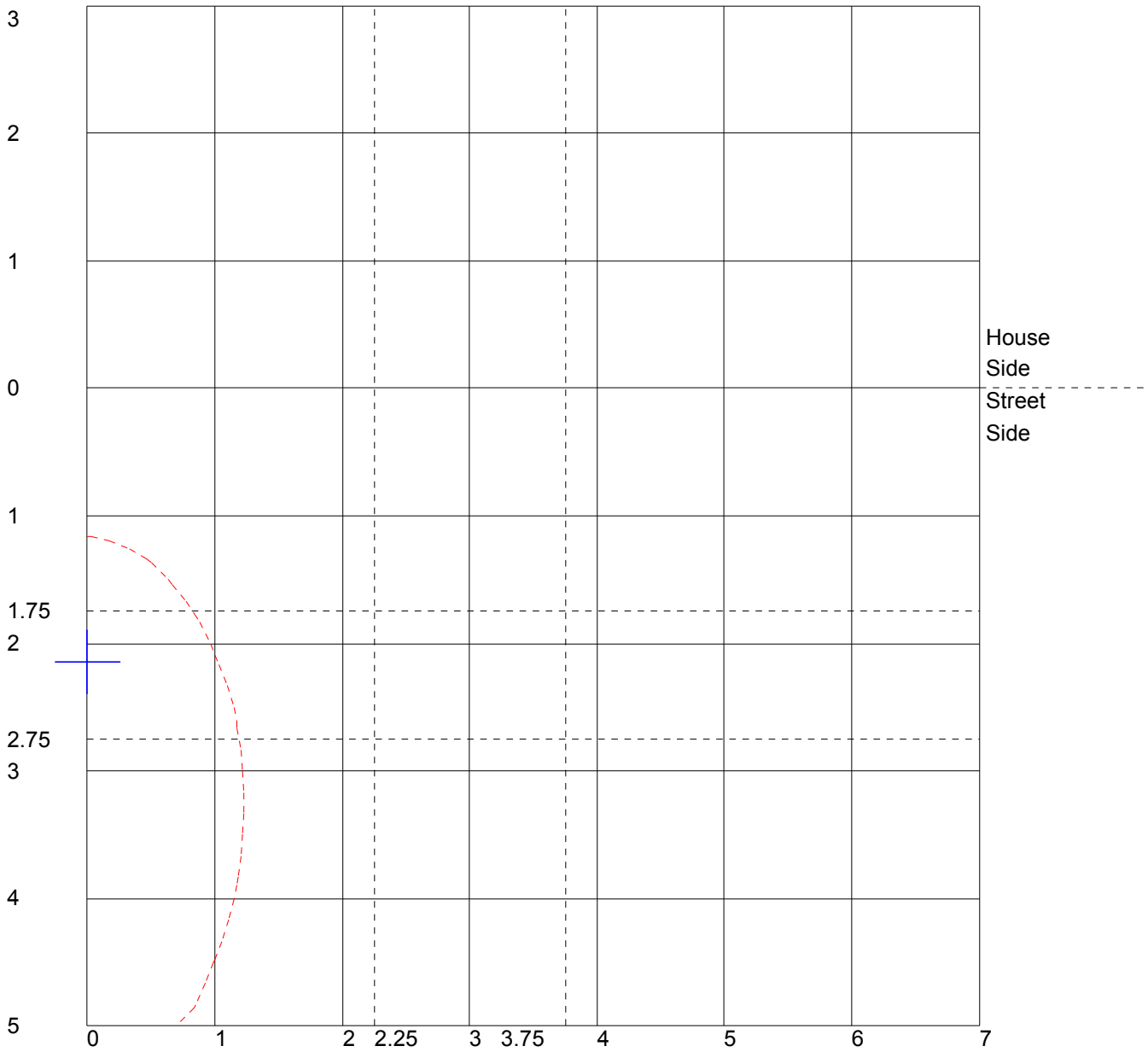


Maximum Candela = 92 Located At Horizontal Angle = 0, Vertical Angle = 65
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (65) (Through Max. Cd.)

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PHOTOMETRIC FILENAME : L092212801.IES

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 20 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

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Results derived from content of manufacturers photometric file.

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NVLAP TESTING
NVLAP LAB CODE 200927-0

Report No: L092212802 **Issue Date: 10/10/2022**

Report Prepared For: FX Luminaire / Lumascape
1940 Diamond Street

Model Number: MPZ-3LED-FW / aRDL6-3LED-WT

Test: Photometric/Colorimetric/Electrical Test

Standards Used: Appropriate part or all test guidelines were used for test performed:

IESNA LM79: 2019 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI NEMA ANSLG C78.377: 2017 Specification of the Chromaticity of Solid State Lighting Products

ANSI C82.77-10:2014: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

Special Test Condition: Fixture is tested with no special conditions.

Date of Tests: 10/7/22

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	4/7/23
HP Power Supply	6032A	PS-DC05-S2	--
Fluke Digital Thermometer	52K/J	MT-TP05	3/17/23
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

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NVLAP TESTING
NVLAP LAB CODE 200927-0

General Information	
Manufacturer:	FX Luminaire / Lumascape
Model Number:	MPZ-3LED-FW / aRDL6-3LED-WT
Driver Model Number:	N/A

Test Summary	
Total Lumens:	185.00
Efficacy:	48.34
Color Redering Index:	83.2
Correlated Color Temperature:	2675
Input Voltage (VAC/60Hz):	12.02
Input Current (Amp):	0.3494
Input Power (W):	3.83
Input Power Factor:	0.9114
Current ATHD (%):	39.8%

Test Condition	
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:30
Total Operating Time (Hours):	2:10

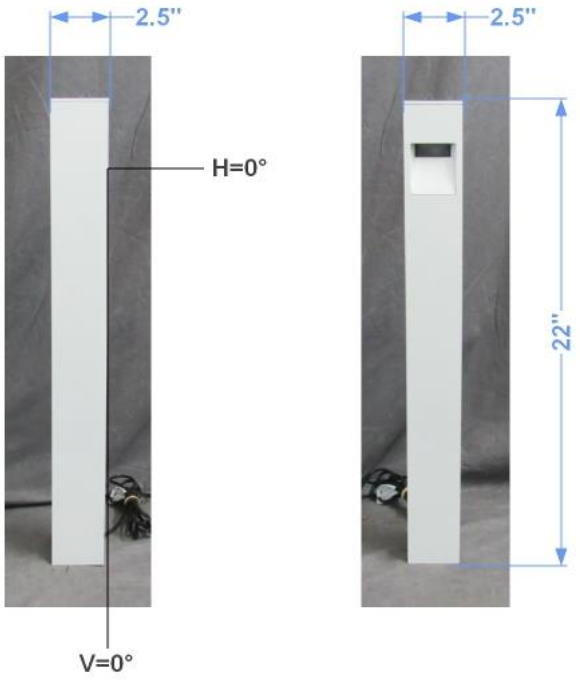


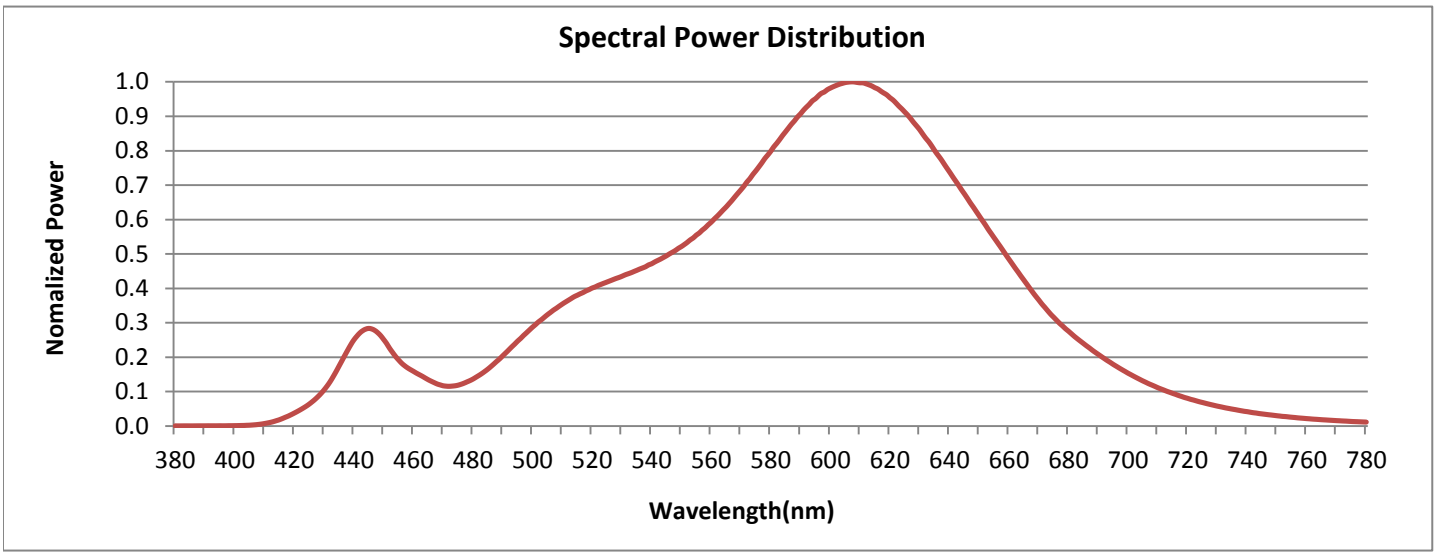
FIG. 1 LUMINAIRE

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Report No: L092212802

NVLAP TESTING
NVLAP LAB CODE 200927-0

Colorimetry Test Results

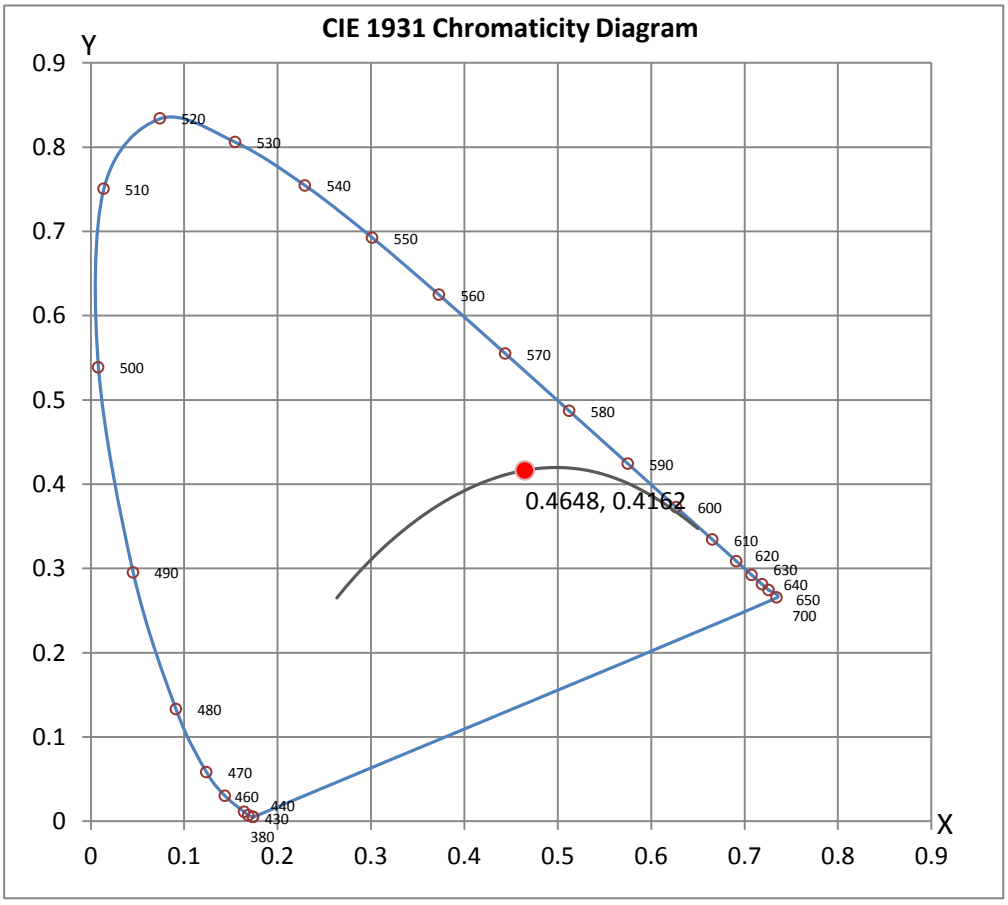


CRI & CCT

x	0.4648
y	0.4162
u'	0.2632
v'	0.5302
CRI	83.20
CCT	2675
Duv	0.00165

R Values

R1	81.20
R2	90.81
R3	97.05
R4	83.07
R5	82.45
R6	91.48
R7	82.27
R8	57.36
R9	7.04
R10	80.57
R11	84.12
R12	80.18
R13	83.23
R14	98.95
R15	72.28



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NVLAP LAB CODE 200927-0

Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25^{o}C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25^{o}C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25^{o}C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25^{o}C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

The results related only to the samples as received and tested. This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government.

Report Prepared by : Kunjan Modi

Test Report Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports.*

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8165 E. Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Photometric Test Report

IES ROAD REPORT
PHOTOMETRIC FILENAME : L092212802.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L092212802
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 10/7/2022
[MANUFAC] FX Luminaire / Lumascape
[LUMCAT] MPZ-3LED-FW / aRDL6-3LED-WT
[LUMINAIRE] Lumiled, 3LED, 2700K
[BALLASTCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 12VAC
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	185
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	48
Total Luminaire Watts	3.82
Ballast Factor	1.00
Upward Waste Light Ratio	0.10
Maximum Candela	168
Maximum Candela Angle	10H 75V
Maximum Candela (<90 Degrees Vertical)	168
Maximum Candela Angle (<90 Degrees Vertical)	10H 75V
Maximum Candela At 90 Degrees Vertical	53 (28.6% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	143 (77.3% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : L092212802.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

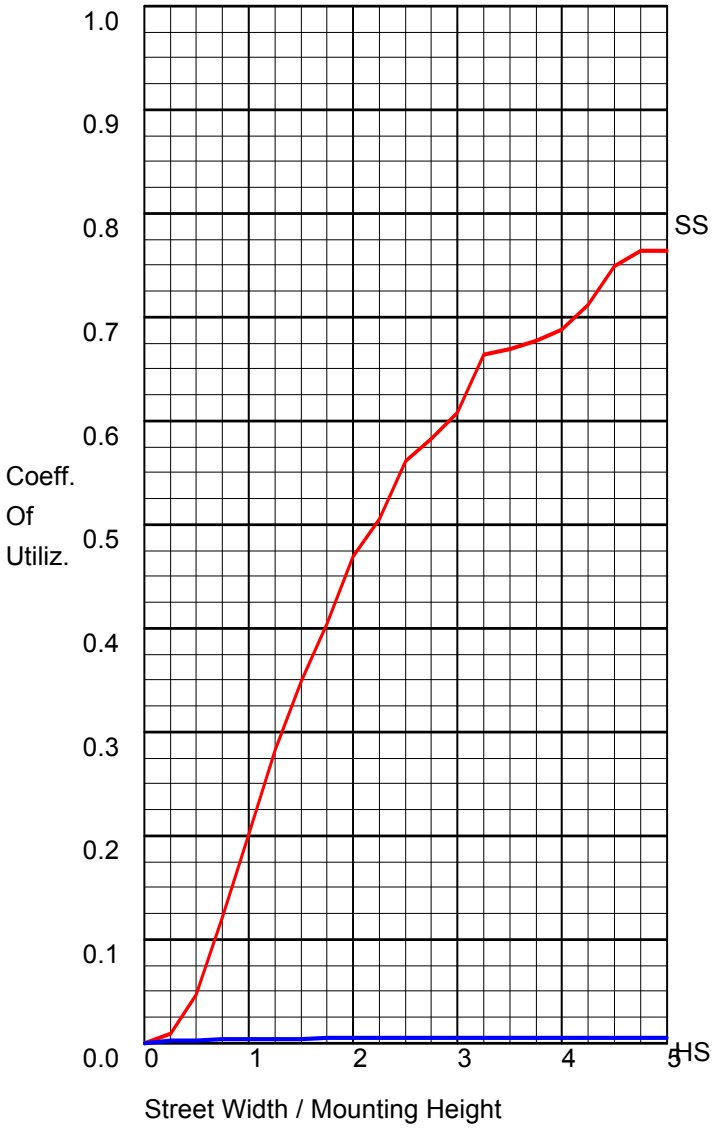
	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	6.6	N.A.	3.6
FM - Front-Medium (30-60)	58.0	N.A.	31.4
FH - Front-High (60-80)	75.7	N.A.	41.0
FVH - Front-Very High (80-90)	25.1	N.A.	13.6
BL - Back-Low (0-30)	0.1	N.A.	0.1
BM - Back-Medium (30-60)	0.3	N.A.	0.2
BH - Back-High (60-80)	0.3	N.A.	0.2
BVH - Back-Very High (80-90)	0.3	N.A.	0.2
UL - Uplight-Low (90-100)	7.6	N.A.	4.1
UH - Uplight-High (100-180)	10.7	N.A.	5.8
Total	184.7	N.A.	100.0
BUG Rating	B0-U2-G1		

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Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : L092212802.IES

COEFFICIENTS OF UTILIZATION



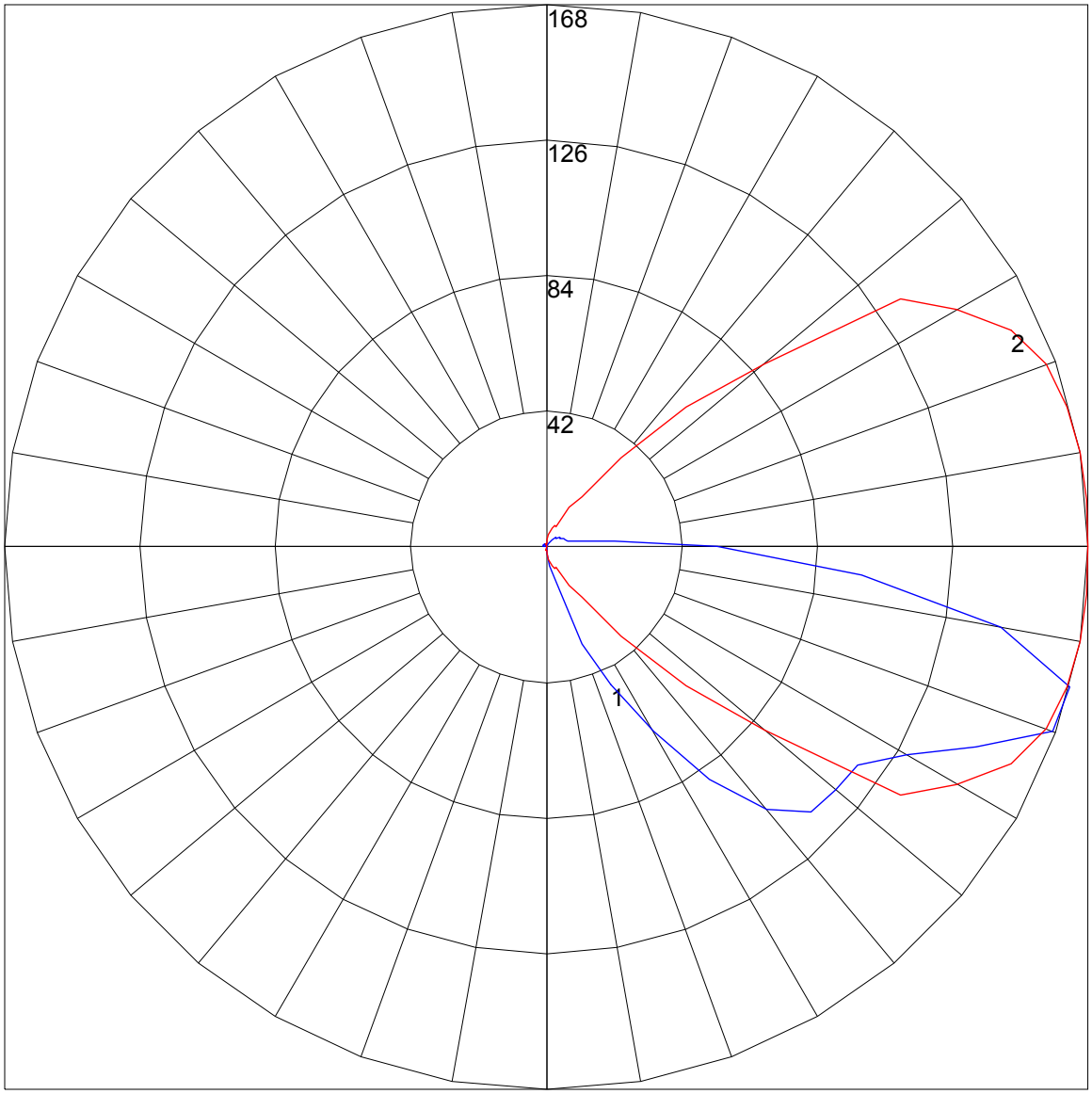
FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	165.4	89.5
Downward House Side	1.1	0.6
Downward Total	166.5	90.1
Upward Street Side	15.3	8.3
Upward House Side	3.0	1.6
Upward Total	18.3	9.9
Total Flux	184.8	100.0

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Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : L092212802.IES

POLAR GRAPH

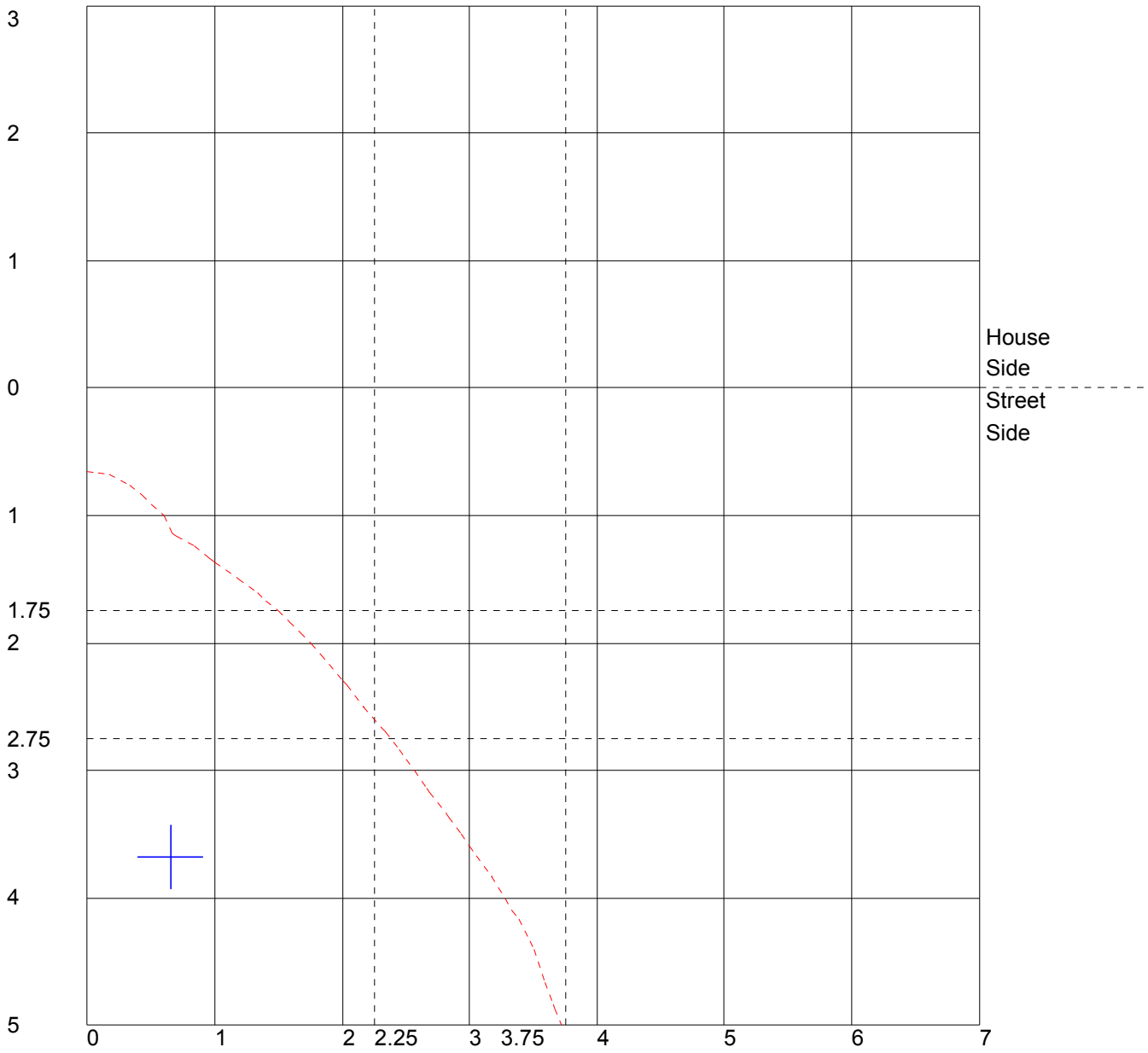


Maximum Candela = 168 Located At Horizontal Angle = 10, Vertical Angle = 75
1 - Vertical Plane Through Horizontal Angles (10 - 190) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (75) (Through Max. Cd.)

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Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : L092212802.IES

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 20 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

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