

# LIGHT LABORATORY, INC.

8165 E Kaiser Blvd. Anaheim, CA 92808

SHT 1 OF 5

Test #: L06110908

Date: 7/22/2011

## Luminaire Photometric Performance LM-79-2008

Manufacturer:	ELATION LIGHTING
Model Number:	TVL 2000 CW

Total Lumens:	2115.92
Input Power (W):	43.14
Input Current (Amp):	0.66
Input Power Factor:	0.55
Efficacy:	49.05
Color Rendering Index ( CRI ):	75.00
Correlated Color Temperature ( K ):	6110
Chromaticity Ordinate x:	0.318
Chromaticity Ordinate y:	0.343

\*Test data documentation on file and available upon request.

\*All results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

REV.	LOG NUMBER	REVISION DESCRIPTION	REVISION BY	CHECKED BY	APPROVED BY	DATE
A					JS	7/22/11

**IES FLOOD REPORT  
PHOTOMETRIC FILENAME : L06110908.IES**

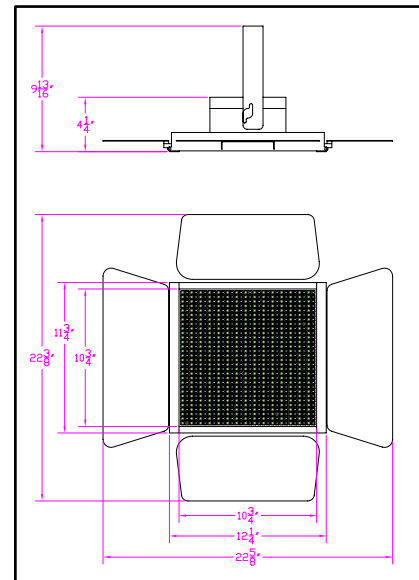
**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] L06110908  
[TESTLAB] LIGHT LABORATORY INC  
[ISSUE DATE] 7/22/2011  
[MANUFAC] ELATION LIGHTING  
[LUMCAT] TVL 2000 CW  
[LUMINAIRE] 12-1/4"L. X 11-3/4"W. X 9-7/8"H. LED TV LIGHT  
[MORE] 450 COOL WHITE LEDS AND 450 WARM WHITE LEDS  
[MORE] TESTED WITH ONLY 450 COOL WHITE LEDS ON  
[BALLAST] 100 TO 240VAC 50/60Hz ELECTRONIC  
[LAMP POSITION] 0,0  
[LAMP CAT] COOL WHITE LED  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[\_INPUT] 120VAC, 43.14W  
[\_TEST PROCEDURE] IESNA:LM-79-08

Note: Candela values converted from Type-C to Type-B

**CHARACTERISTICS**

NEMA Type	4 H x 4 V
Maximum Candela	6243
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	21.9
Vertical Beam Angle (50%)	21.9
Horizontal Field Angle (10%)	57.6
Vertical Field Angle (10%)	57.3
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	502
Beam Efficiency	N.A.
Field Lumens	1399
Field Efficiency	N.A.
Spill Lumens	717
Luminaire Lumens	2116
Total Efficiency	N.A.
Total Luminaire Watts	43.14
Ballast Factor	1.00

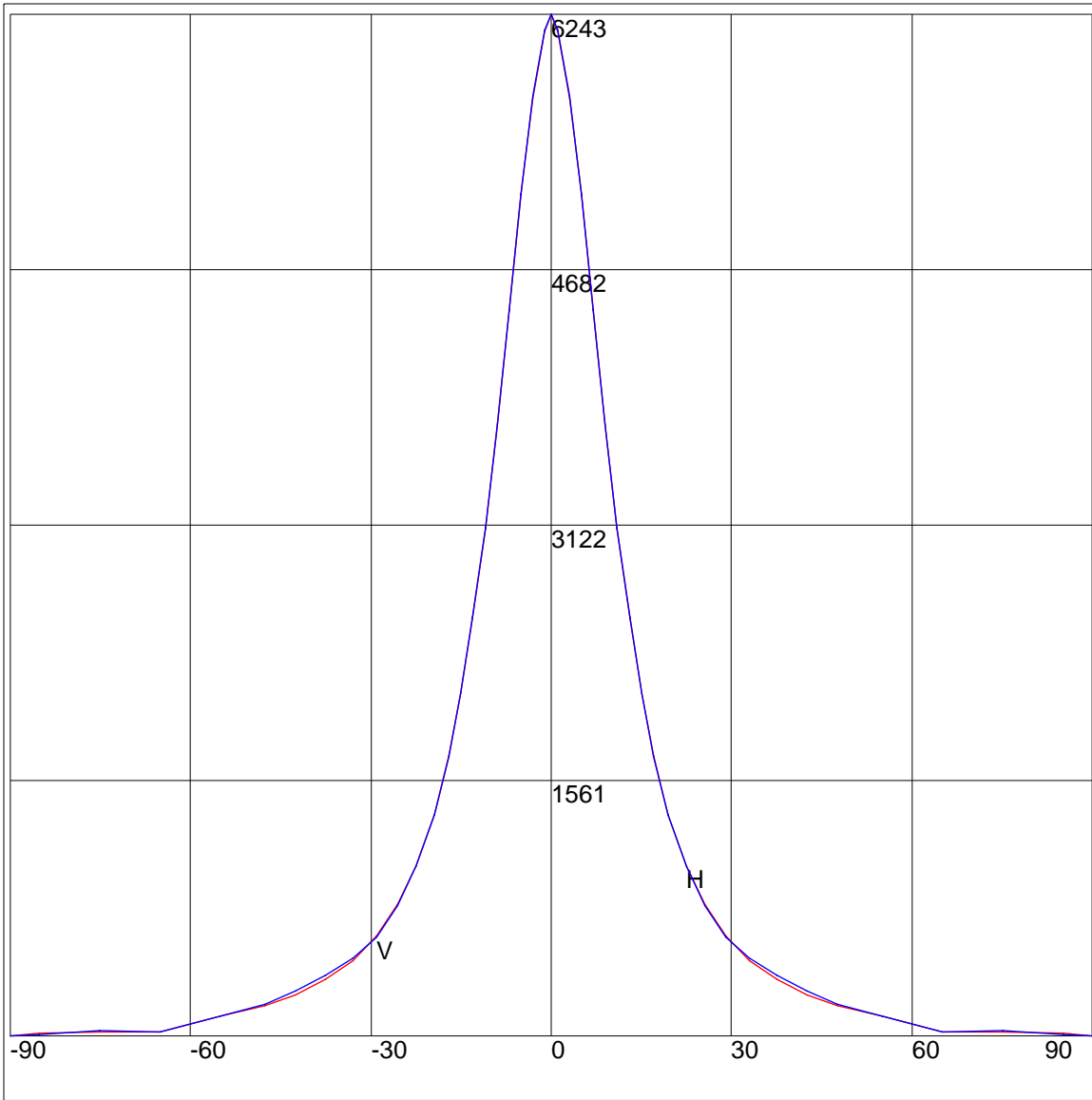


**IES FLOOD REPORT**  
**PHOTOMETRIC FILENAME : L06110908.IES**

**AXIAL CANDELA**

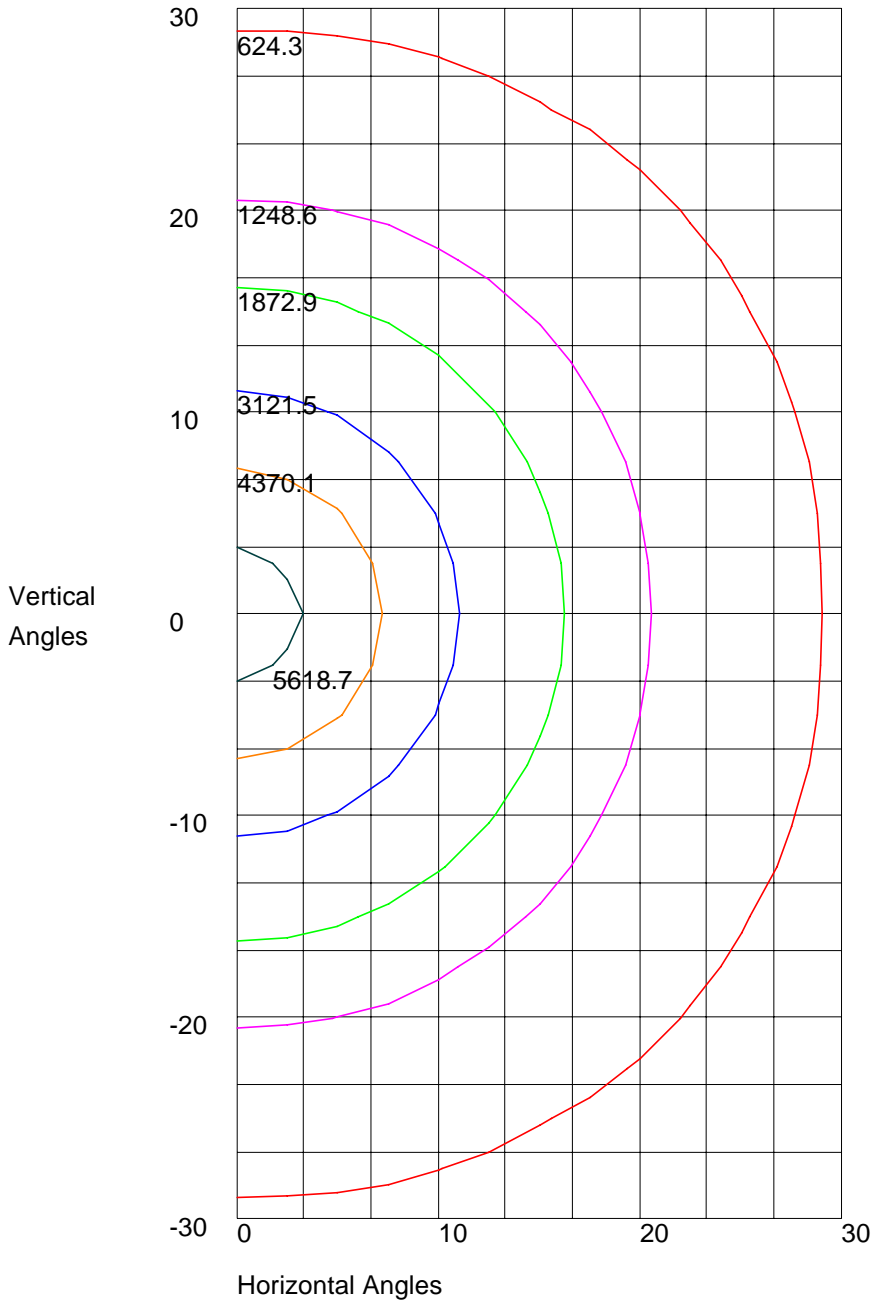
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	16	85	15
75	30	75	33
65	27	65	26
55	128	55	121
47.5	189	47.5	197
42.5	257	42.5	274
37.5	351	37.5	371
33	463	33	479
29	614	29	606
25.5	807	25.5	797
22.5	1042	22.5	1041
19.5	1357	19.5	1354
17	1720	17	1711
15	2096	15	2091
13	2554	13	2559
11	3102	11	3104
9	3741	9	3735
7	4444	7	4434
5	5150	5	5140
3	5729	3	5747
1	6136	1	6148
0	6243	0	6243
-1	6136	-1	6148
-3	5729	-3	5747
-5	5150	-5	5140
-7	4444	-7	4434
-9	3741	-9	3735
-11	3102	-11	3104
-13	2554	-13	2559
-15	2096	-15	2091
-17	1720	-17	1711
-19.5	1357	-19.5	1354
-22.5	1042	-22.5	1041
-25.5	807	-25.5	797
-29	614	-29	606
-33	463	-33	479
-37.5	351	-37.5	371
-42.5	257	-42.5	274
-47.5	189	-47.5	197
-55	128	-55	121
-65	27	-65	26
-75	30	-75	33
-85	16	-85	15
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 6243 Located At Horizontal Angle = 0, Vertical Angle = 0  
H - Horizontal Axial Candela  
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 6243 Located At Horizontal Angle = 0, Vertical Angle = 0  
50% Maximum Candela = 3121.5  
10% Maximum Candela = 624.3

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Test #: L06110909

Date: 7/22/2011

## Luminaire Photometric Performance LM-79-2008

Manufacturer:	ELATION LIGHTING
Model Number:	TVL 2000 WW

Total Lumens:	2018.32
Input Power (W):	43.86
Input Current (Amp):	0.67
Input Power Factor:	0.55
Efficacy:	46.02
Color Rendering Index ( CRI ):	65.20
Correlated Color Temperature ( K ):	3036
Chromaticity Ordinate x:	0.440
Chromaticity Ordinate y:	0.416

\*Test data documentation on file and available upon request.

\*All results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

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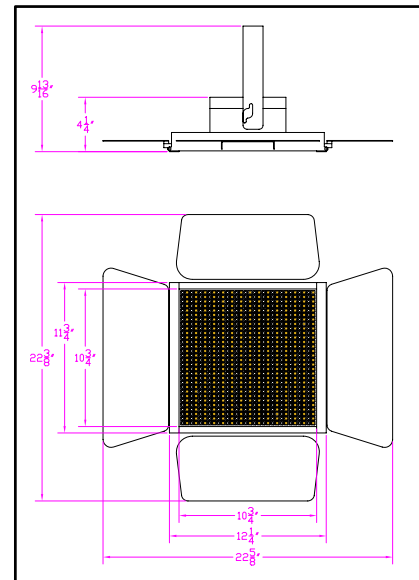
**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] L06110909  
[TESTLAB] LIGHT LABORATORY INC  
[ISSUEDATE] 7/22/2011  
[MANUFAC] ELATION LIGHTING  
[LUMCAT] TVL 2000 WW  
[LUMINAIRE] 12-1/4"L. X 11-3/4"W. X 9-7/8"H. LED TV LIGHT  
[MORE] 450 COOL WHITE LEDS AND 450 WARM WHITE LEDS  
[MORE] TESTED WITH ONLY 450 WARM WHITE LEDS ON  
[BALLAST] 100 TO 240VAC 50/60Hz ELECTRONIC  
[LAMPPOSITION] 0,0  
[LAMPCAT] WARM WHITE LED  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[\_INPUT] 120VAC, 43.86W  
[\_TEST PROCEDURE] IESNA:LM-79-08

Note: Candela values converted from Type-C to Type-B

**CHARACTERISTICS**

NEMA Type	4 H x 4 V
Maximum Candela	5243
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	23.0
Vertical Beam Angle (50%)	22.8
Horizontal Field Angle (10%)	62.3
Vertical Field Angle (10%)	62.8
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	445
Beam Efficiency	N.A.
Field Lumens	1335
Field Efficiency	N.A.
Spill Lumens	683
Luminaire Lumens	2018
Total Efficiency	N.A.
Total Luminaire Watts	43.86
Ballast Factor	1.00



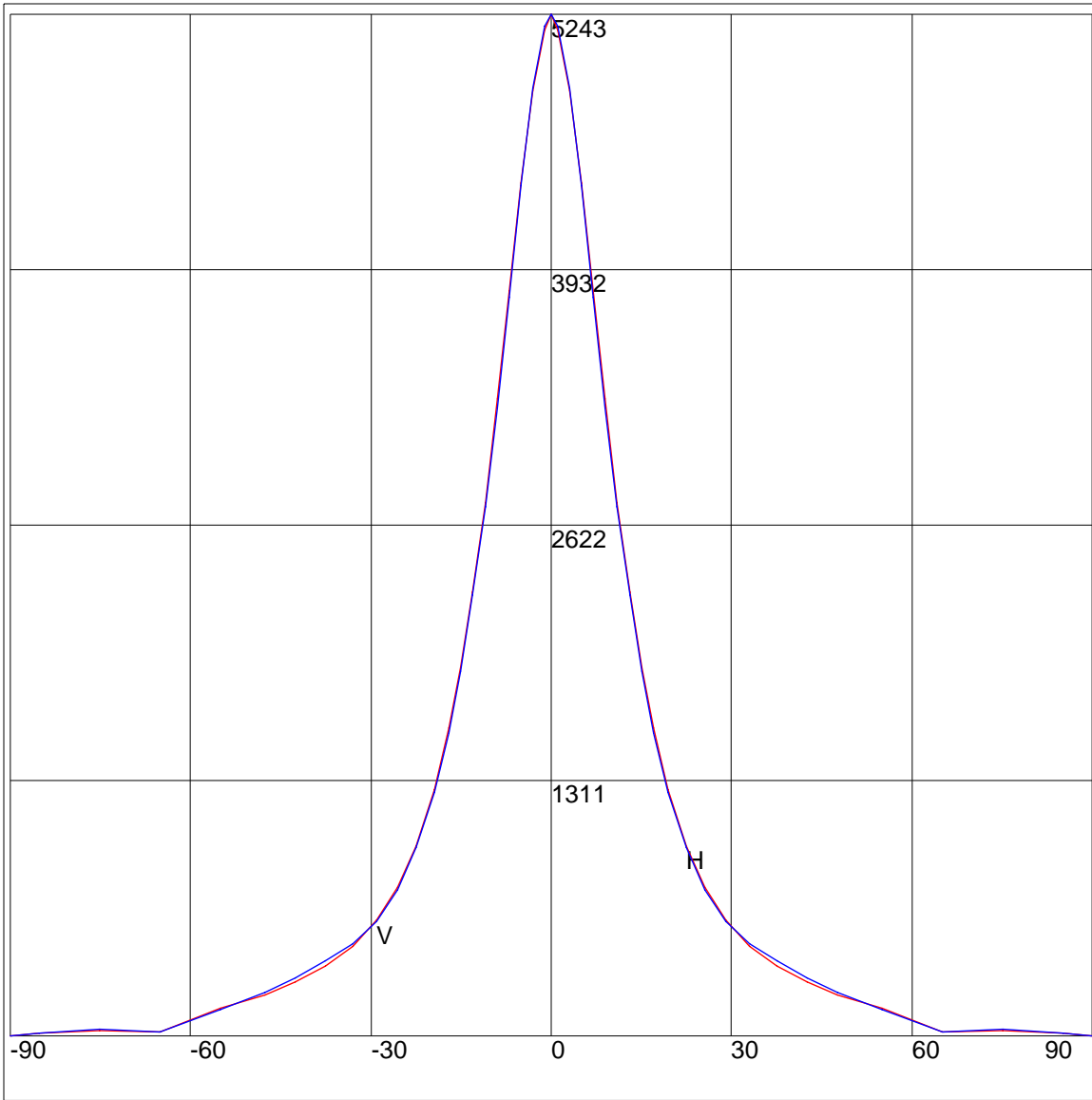
**IES FLOOD REPORT**  
**PHOTOMETRIC FILENAME : L06110909.IES**

**AXIAL CANDELA**

DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	15	85	14
75	30	75	34
65	26	65	26
55	145	55	141
47.5	210	47.5	223
42.5	277	42.5	298
37.5	362	37.5	386
33	461	33	478
29	597	29	594
25.5	766	25.5	755
22.5	975	22.5	971
19.5	1267	19.5	1252
17	1583	17	1558
15	1896	15	1874
13	2277	13	2264
11	2737	11	2716
9	3271	9	3225
7	3826	7	3791
5	4377	5	4367
3	4852	3	4867
1	5164	1	5185
0	5243	0	5243
-1	5164	-1	5185
-3	4852	-3	4867
-5	4377	-5	4367
-7	3826	-7	3791
-9	3271	-9	3225
-11	2737	-11	2716
-13	2277	-13	2264
-15	1896	-15	1874
-17	1583	-17	1558
-19.5	1267	-19.5	1252
-22.5	975	-22.5	971
-25.5	766	-25.5	755
-29	597	-29	594
-33	461	-33	478
-37.5	362	-37.5	386
-42.5	277	-42.5	298
-47.5	210	-47.5	223
-55	145	-55	141
-65	26	-65	26
-75	30	-75	34
-85	15	-85	14
-90	0	-90	0



AXIAL CANDELA DISPLAY

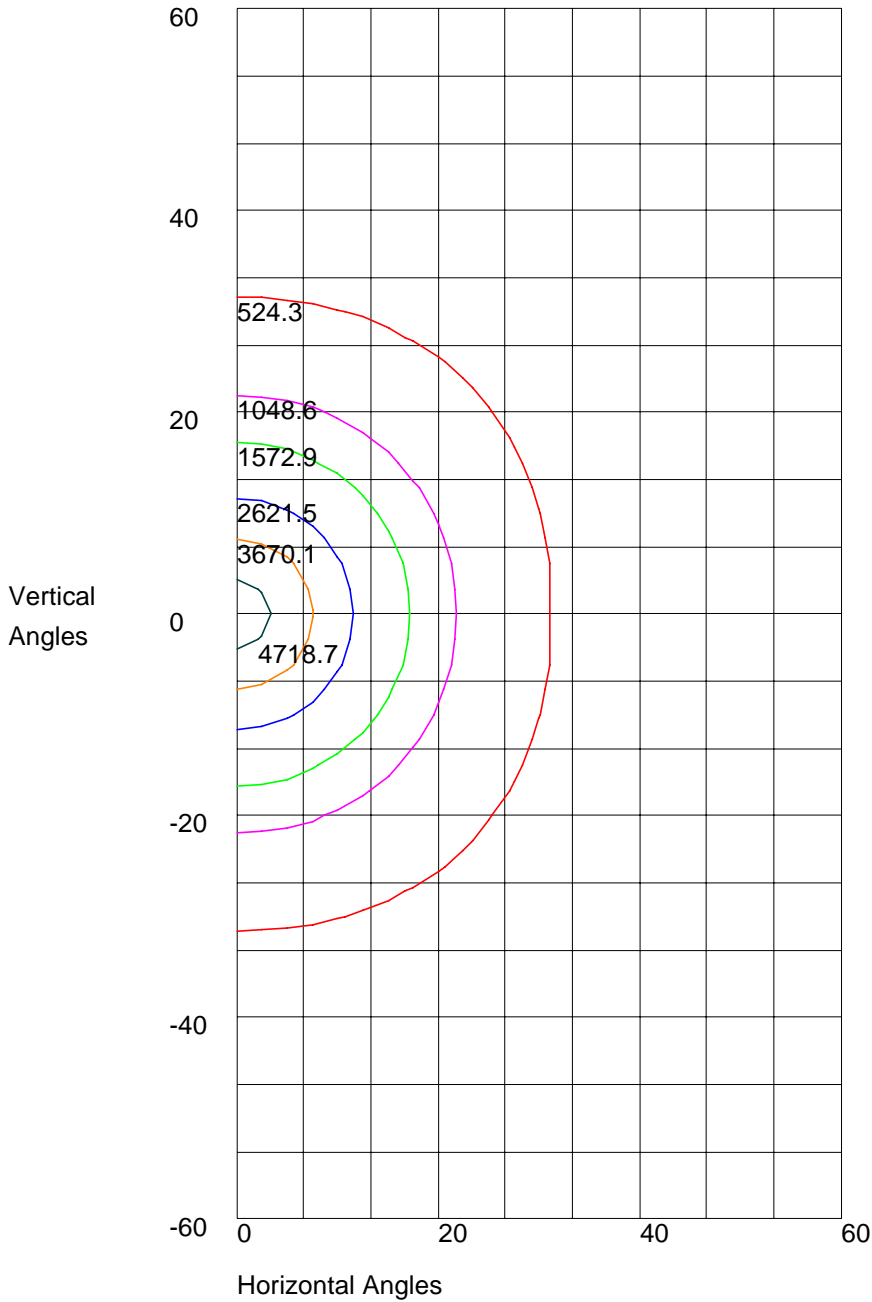


Maximum Candela = 5243 Located At Horizontal Angle = 0, Vertical Angle = 0

H - Horizontal Axial Candela

V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 5243 Located At Horizontal Angle = 0, Vertical Angle = 0  
50% Maximum Candela = 2621.5  
10% Maximum Candela = 524.3

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Test #: L06110910

Date: 7/22/2011

## Luminaire Photometric Performance LM-79-2008

Manufacturer:	ELATION LIGHTING
Model Number:	TVL 2000 CW & WW

Total Lumens:	4047.96
Input Power (W):	87.20
Input Current (Amp):	1.27
Input Power Factor:	0.57
Efficacy:	46.42
Color Rendering Index ( CRI ):	73.10
Correlated Color Temperature ( K ):	4143
Chromaticity Ordinate x:	0.375
Chromaticity Ordinate y:	0.379

\*Test data documentation on file and available upon request.

\*All results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

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PHOTOMETRIC FILENAME : L06110910.IES**

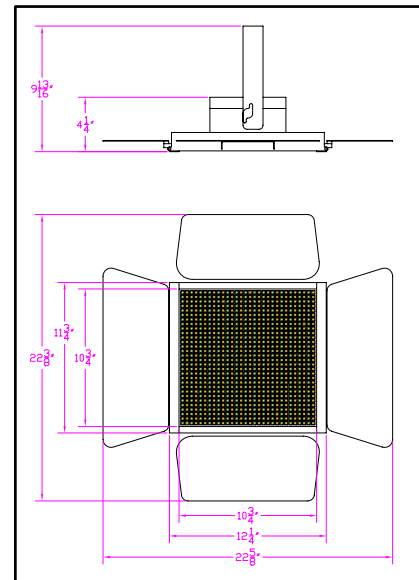
**DESCRIPTIVE INFORMATION (From Photometric File)**

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[TEST] L06110910  
[TESTLAB] LIGHT LABORATORY INC  
[ISSUE DATE] 7/22/2011  
[MANUFAC] ELATION LIGHTING  
[LUMCAT] TVL 2000 CW & WW  
[LUMINAIRE] 12-1/4"L. X 11-3/4"W. X 9-7/8"H. LED TV LIGHT  
[MORE] 450 COOL WHITE LEDS AND 450 WARM WHITE LEDS  
[MORE] TESTED WITH BOTH 450 COOL WHITE LEDS AND 450 WARM WHITE LEDS  
[BALLAST] 100 TO 240VAC 50/60Hz ELECTRONIC  
[LAMP POSITION] 0,0  
[LAMP CAT] COOL WHITE AND WARM WHITE LED  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[\_INPUT] 120VAC, 87.20W  
[\_TEST PROCEDURE] IESNA:LM-79-08

Note: Candela values converted from Type-C to Type-B

**CHARACTERISTICS**

NEMA Type	4 H x 4 V
Maximum Candela	11111
Maximum Candela Angle	0H 0V
Horizontal Beam Angle (50%)	22.7
Vertical Beam Angle (50%)	22.7
Horizontal Field Angle (10%)	60.1
Vertical Field Angle (10%)	60.2
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Beam Lumens	941
Beam Efficiency	N.A.
Field Lumens	2662
Field Efficiency	N.A.
Spill Lumens	1386
Luminaire Lumens	4048
Total Efficiency	N.A.
Total Luminaire Watts	87.2
Ballast Factor	1.00

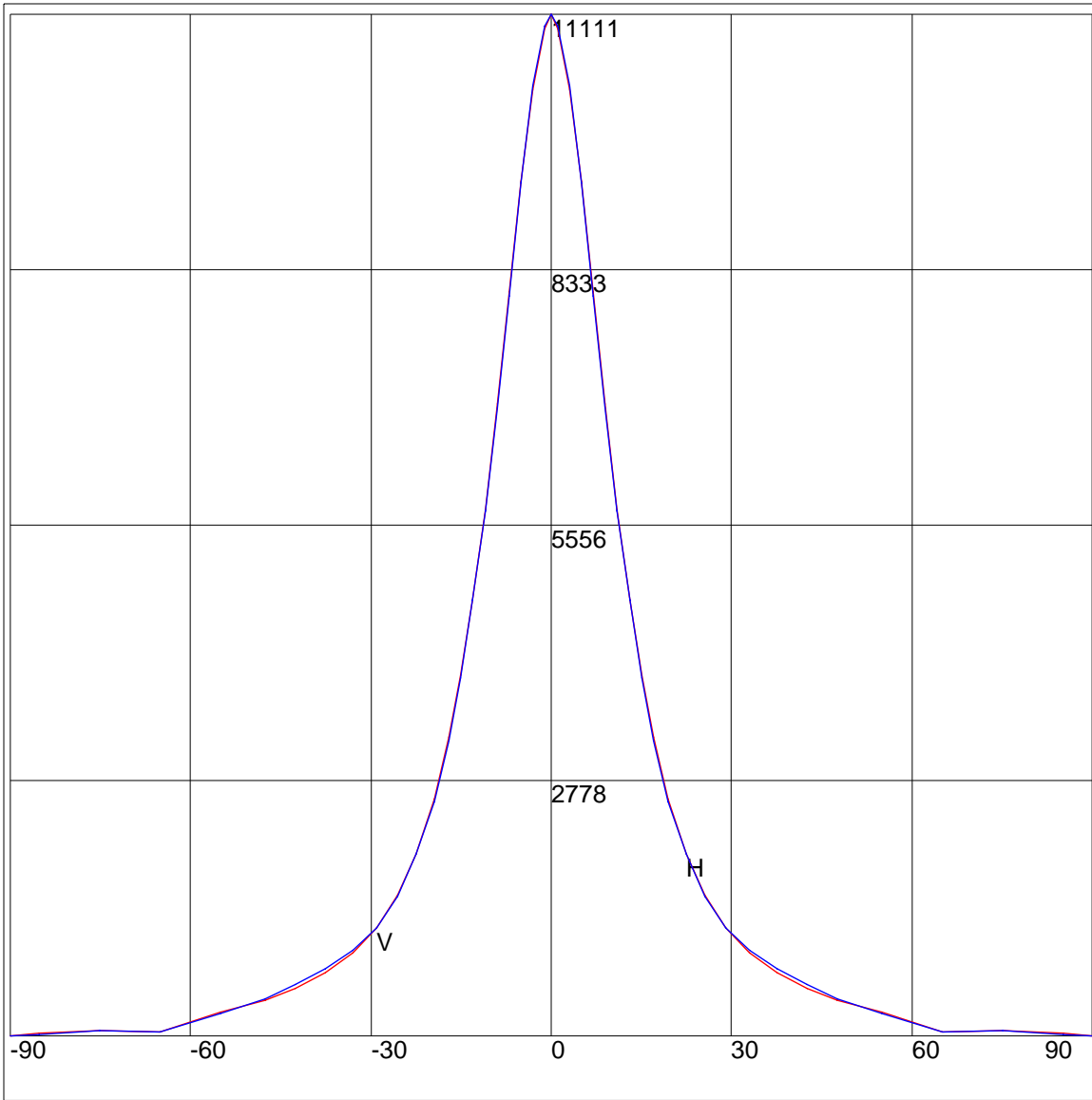


**IES FLOOD REPORT**  
**PHOTOMETRIC FILENAME : L06110910.IES**

**AXIAL CANDELA**

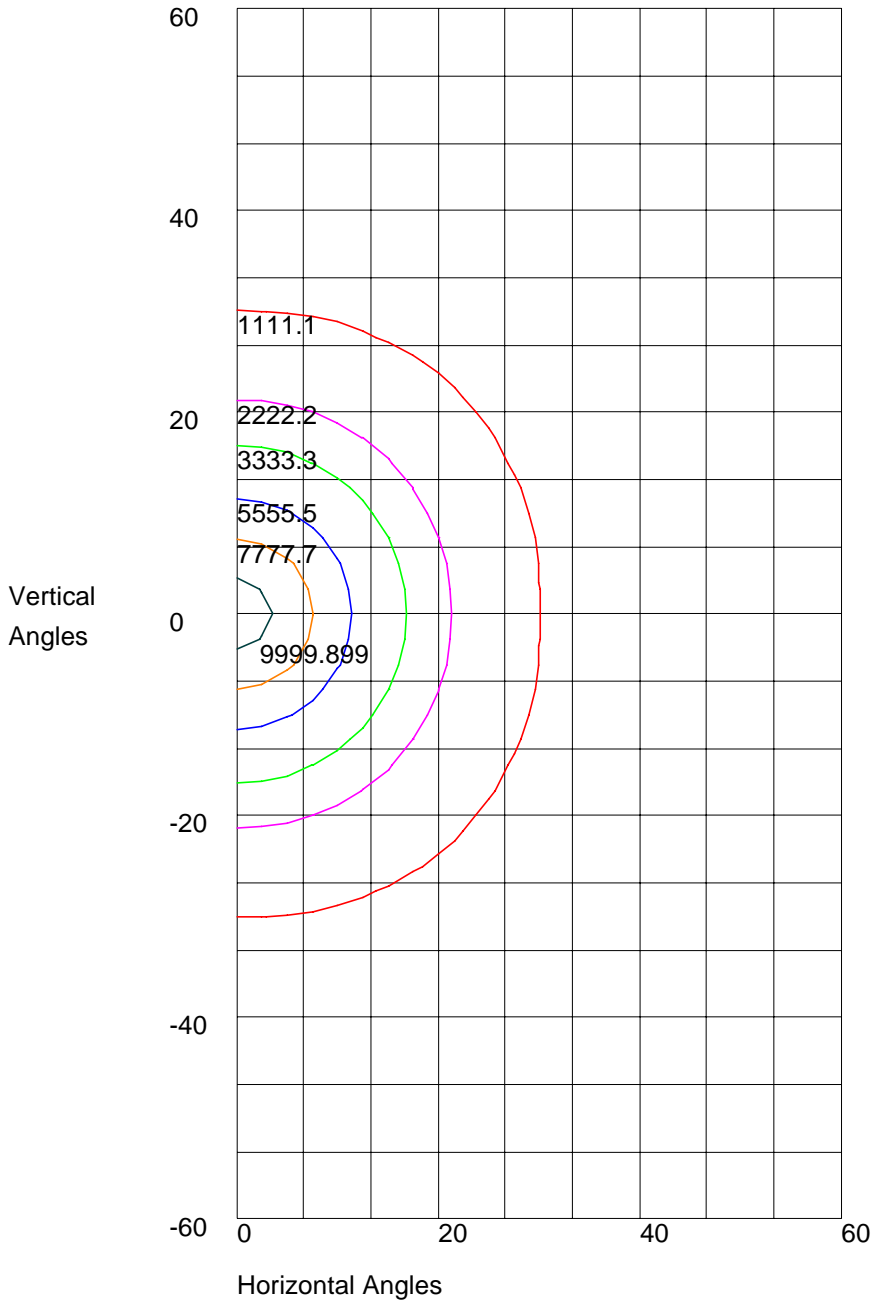
DEG.	HOR.	DEG.	VERT.
90	0	90	0
85	30	85	28
75	57	75	65
65	52	65	51
55	266	55	256
47.5	390	47.5	411
42.5	522	42.5	559
37.5	696	37.5	739
33	904	33	936
29	1186	29	1176
25.5	1543	25.5	1525
22.5	1981	22.5	1976
19.5	2577	19.5	2561
17	3249	17	3217
15	3926	15	3899
13	4745	13	4744
11	5732	11	5715
9	6874	9	6827
7	8097	7	8054
5	9295	5	9284
3	10292	3	10334
1	10955	1	10980
0	11111	0	11111
-1	10955	-1	10980
-3	10292	-3	10334
-5	9295	-5	9284
-7	8097	-7	8054
-9	6874	-9	6827
-11	5732	-11	5715
-13	4745	-13	4744
-15	3926	-15	3899
-17	3249	-17	3217
-19.5	2577	-19.5	2561
-22.5	1981	-22.5	1976
-25.5	1543	-25.5	1525
-29	1186	-29	1176
-33	904	-33	936
-37.5	696	-37.5	739
-42.5	522	-42.5	559
-47.5	390	-47.5	411
-55	266	-55	256
-65	52	-65	51
-75	57	-75	65
-85	30	-85	28
-90	0	-90	0

AXIAL CANDELA DISPLAY



Maximum Candela = 11111 Located At Horizontal Angle = 0, Vertical Angle = 0  
H - Horizontal Axial Candela  
V - Vertical Axial Candela

ISOCANDELA CURVES



Maximum Candela = 11111 Located At Horizontal Angle = 0, Vertical Angle = 0  
50% Maximum Candela = 5555.5  
10% Maximum Candela = 1111.1