

LIGHT LABORATORY, INC.

8165 E Kaiser Blvd. Anaheim, CA 92808

SHT 1 OF 7

Test #: L03113601

Date: 4/7/2011

Luminaire Photometric Performance LM-79-2008

Manufacturer:	ATEX AMERICA, INC.
Model Number:	TL10-090AL

Total Lumens:	664.40
Input Power (W):	11.64
Input Current (Amp):	0.18
Input Power Factor:	0.53
Efficacy:	57.08
Color Rendering Index (CRI):	76.60
Correlated Color Temperature (K):	3281
Chromaticity Ordinate x:	0.412
Chromaticity Ordinate y:	0.382

*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	4/7/11

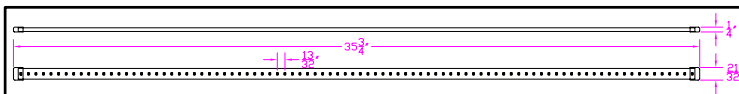
**IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03113601.IES**

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L03113601
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 4/7/2011
[MANUFAC] ATEX AMERICA, INC.
[LUMCAT] TL10-090AL
[LUMINAIRE] 35-3/4"L. X 21/32"W. X 1/4"H. LED STRIP
[MORE] FIVE MODULES, EACH MODULE HAS 18 WARM WHITE LEDS
[MORE] 13/32" SPACING, TOTAL 90 LEDS
[BALLASTCAT] JET GF12-US2405
[BALLAST] INPUT:100-240VAC 50-60Hz 0.3A, OUTPUT:24VDC 0.5A
[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, 11.64W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	664
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	57
Total Luminaire Watts	11.64
Ballast Factor	1.00
CIE Type	Direct
Spacing Criteria (0-180)	1.30
Spacing Criteria (90-270)	1.32
Spacing Criteria (Diagonal)	1.44
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	2.94 ft
Luminous Width (90-270)	0.05 ft
Luminous Height	0.01 ft



IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03113601.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	14233	12749	12689
55	14038	12362	13199
65	13576	12211	14003
75	11605	11929	11844
85	6722	8314	6373

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03113601.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	195.31	195.31	195.31	195.31	195.31
5	194.58	194.58	195.00	194.58	195.41
10	192.92	192.92	192.50	192.92	192.09
15	188.76	188.76	189.18	189.18	188.76
20	184.60	183.36	183.77	185.02	183.77
25	177.12	177.95	177.54	178.78	176.29
30	168.80	169.22	169.64	170.47	170.47
35	160.49	160.07	161.74	162.57	163.82
40	148.85	150.09	151.76	154.25	155.50
45	138.04	138.45	140.95	144.27	147.18
50	125.56	126.81	128.89	135.54	138.87
55	110.60	112.67	116.83	128.47	133.05
60	95.63	97.71	104.78	120.16	126.40
65	79.00	81.49	92.30	109.76	115.59
70	61.53	64.45	78.58	94.80	94.80
75	41.58	48.65	64.86	74.84	73.18
80	24.12	30.35	46.98	50.31	48.23
85	8.32	14.55	26.19	26.19	24.95
90	0.00	5.41	11.64	11.64	10.81
95	0.00	3.74	7.90	7.48	7.48
100	0.00	2.08	5.41	7.07	8.32
105	0.00	1.66	4.57	6.24	7.48
110	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03113601.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	153.84	N.A.	23.20
0-40	254.97	N.A.	38.40
0-60	471.71	N.A.	71.00
0-90	654.29	N.A.	98.50
90-120	10.12	N.A.	1.50
90-130	10.12	N.A.	1.50
90-150	10.12	N.A.	1.50
90-180	10.12	N.A.	1.50
0-180	664.40	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	18.53
10-20	53.39
20-30	81.92
30-40	101.14
40-50	109.42
50-60	107.32
60-70	93.61
70-80	64.10
80-90	24.86
90-100	6.72
100-110	3.40
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

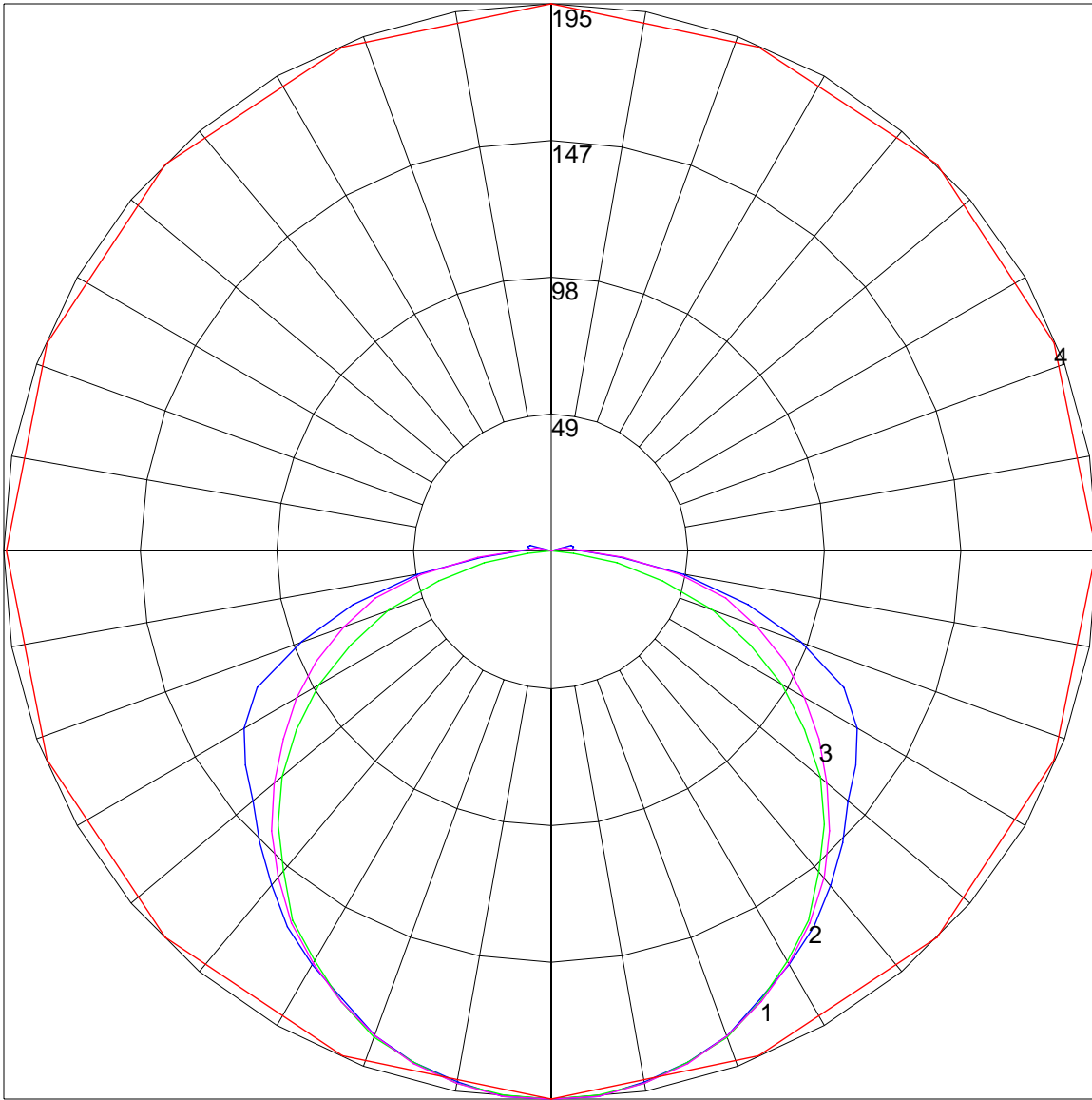
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03113601.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101	99
1	107	102	97	92	104	99	95	91	94	91	87	90	87	84	86	84	82	79
2	96	87	80	73	94	85	78	72	81	76	70	78	73	69	74	70	67	64
3	87	76	67	60	85	74	66	59	71	64	58	68	62	57	65	60	56	53
4	80	67	57	50	77	65	57	50	63	55	49	60	53	48	58	52	47	45
5	73	59	50	43	71	58	49	42	56	48	42	54	47	41	51	45	41	38
6	67	53	44	37	65	52	43	37	50	42	36	48	41	36	46	40	35	33
7	62	48	39	32	60	47	38	32	45	38	32	44	37	32	42	36	31	29
8	58	44	35	29	56	43	35	29	41	34	28	40	33	28	39	33	28	26
9	54	40	32	26	52	39	31	26	38	31	25	37	30	25	36	30	25	23
10	51	37	29	23	49	36	28	23	35	28	23	34	28	23	33	27	23	21

POLAR GRAPH



Maximum Candela = 195.41 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.) : BLUE
2 - Vertical Plane Through Horizontal Angles (0 - 180) : GREEN
3 - Vertical Plane Through Horizontal Angles (45 - 225) : MAGENTA
4 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.) : RED

LIGHT LABORATORY, INC.

8165 E Kaiser Blvd. Anaheim, CA 92808

SHT 1 OF 7

Test #: L03113602

Date: 4/7/2011

Luminaire Photometric Performance LM-79-2008

Manufacturer:	ATEX AMERICA, INC.
Model Number:	TL10-090AW

Total Lumens:	651.63
Input Power (W):	11.58
Input Current (Amp):	0.18
Input Power Factor:	0.53
Efficacy:	56.27
Color Rendering Index (CRI):	77.20
Correlated Color Temperature (K):	8140
Chromaticity Ordinate x:	0.300
Chromaticity Ordinate y:	0.283

*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	4/7/11

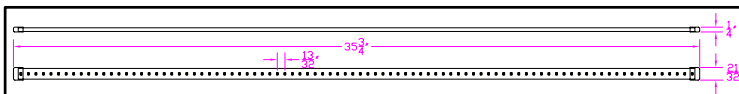
**IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03113602.IES**

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L03113602
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUEDATE] 4/7/2011
 [MANUFAC] ATEX AMERICA, INC.
 [LUMCAT] TL10-090AW
 [LUMINAIRE] 35-3/4"L. X 21/32"W. X 1/4"H. LED STRIP
 [MORE] FIVE MODULES, EACH MODULE HAS 18 COOL WHITE LEDS
 [MORE] 13/32" SPACING, TOTAL 90 LEDS
 [BALLASTCAT] JET GF12-US2405
 [BALLAST] INPUT:100-240VAC 50-60Hz 0.3A, OUTPUT:24VDC 0.5A
 [LAMPPOSITION] 0,0
 [LAMPCAT] COOL WHITE LED
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [_INPUT] 120VAC, 11.58W
 [_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	652
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	56
Total Luminaire Watts	11.58
Ballast Factor	1.00
CIE Type	Direct
Spacing Criteria (0-180)	1.34
Spacing Criteria (90-270)	1.54
Spacing Criteria (Diagonal)	1.62
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	2.94 ft
Luminous Width (90-270)	0.05 ft
Luminous Height	0.01 ft



IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03113602.IES

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	13546	13990	14267
55	14038	14518	13282
65	14146	13697	11181
75	13461	10936	8345
85	8063	6337	5098

**IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03113602.IES**

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	172.34	172.34	172.34	172.34	172.34
5	171.30	172.13	172.55	171.30	172.13
10	171.30	170.47	171.71	171.71	170.47
15	167.97	167.97	168.80	170.47	170.47
20	165.48	166.31	167.56	170.05	170.47
25	159.66	161.74	165.06	168.39	170.47
30	154.67	156.33	162.15	168.39	170.47
35	147.18	151.76	159.24	167.97	172.13
40	141.36	144.69	157.16	167.97	170.47
45	131.38	136.79	154.67	163.82	165.48
50	121.41	127.64	147.18	154.67	153.01
55	110.60	116.83	137.21	136.79	133.88
60	98.12	105.19	122.65	116.42	113.09
65	82.32	90.22	103.53	95.63	92.30
70	64.03	74.42	81.91	72.76	69.02
75	48.23	54.88	59.46	52.80	51.56
80	25.78	35.34	38.67	34.93	34.09
85	9.98	16.63	19.96	19.13	19.96
90	0.00	4.16	6.65	9.56	11.64
95	0.00	2.50	5.41	8.32	9.98
100	0.00	0.83	4.57	7.90	9.15
105	0.00	1.25	4.99	7.48	7.48
110	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03113602.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	140.72	N.A.	21.60
0-40	240.88	N.A.	37.00
0-60	471.25	N.A.	72.30
0-90	642.22	N.A.	98.60
90-120	9.41	N.A.	1.40
90-130	9.41	N.A.	1.40
90-150	9.41	N.A.	1.40
90-180	9.41	N.A.	1.40
0-180	651.63	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	16.39
10-20	47.97
20-30	76.37
30-40	100.16
40-50	116.04
50-60	114.34
60-70	92.79
70-80	57.31
80-90	20.87
90-100	5.90
100-110	3.50
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

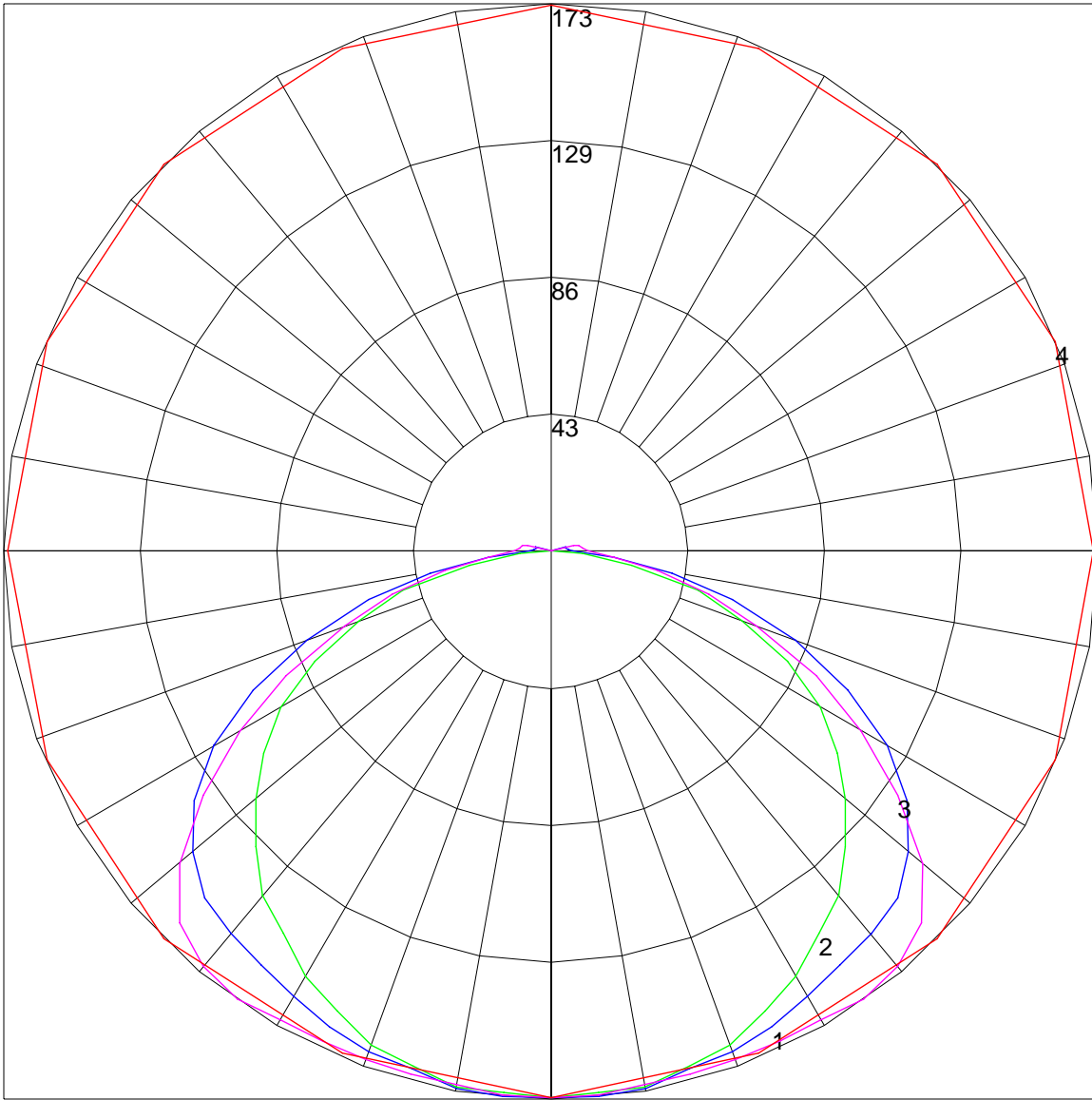
IES INDOOR REPORT
PHOTOMETRIC FILENAME : L03113602.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101	99
1	107	102	97	93	104	99	95	91	95	91	88	91	88	85	87	84	82	80
2	96	87	80	74	94	85	79	73	82	76	71	78	73	69	75	71	67	65
3	87	76	67	60	85	74	66	59	71	64	58	68	62	57	65	60	56	53
4	79	67	57	50	77	65	56	50	62	55	49	60	53	48	57	52	47	45
5	73	59	49	42	70	58	49	42	55	48	41	53	46	41	51	45	40	38
6	67	53	43	37	65	52	43	36	50	42	36	48	41	35	46	40	35	33
7	62	48	38	32	60	47	38	32	45	37	31	43	36	31	42	35	31	29
8	57	43	34	28	56	42	34	28	41	33	28	39	33	27	38	32	27	25
9	53	39	31	25	52	39	31	25	37	30	25	36	29	25	35	29	24	22
10	50	36	28	23	49	36	28	22	35	27	22	33	27	22	32	26	22	20

POLAR GRAPH



Maximum Candela = 172.55 Located At Horizontal Angle = 45, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.) : BLUE
2 - Vertical Plane Through Horizontal Angles (0 - 180) : GREEN
3 - Vertical Plane Through Horizontal Angles (90 - 270) : MAGENTA
4 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.) : RED