

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: INVUE

Report Number:

Luminaire Tested: **ENT-SA1-740-U-T3-ULG-XXB**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400792 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1-740-U-T3-ULG-XXB
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2559.9 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type III - Short
BUG Rating: B0 - U5 - G0

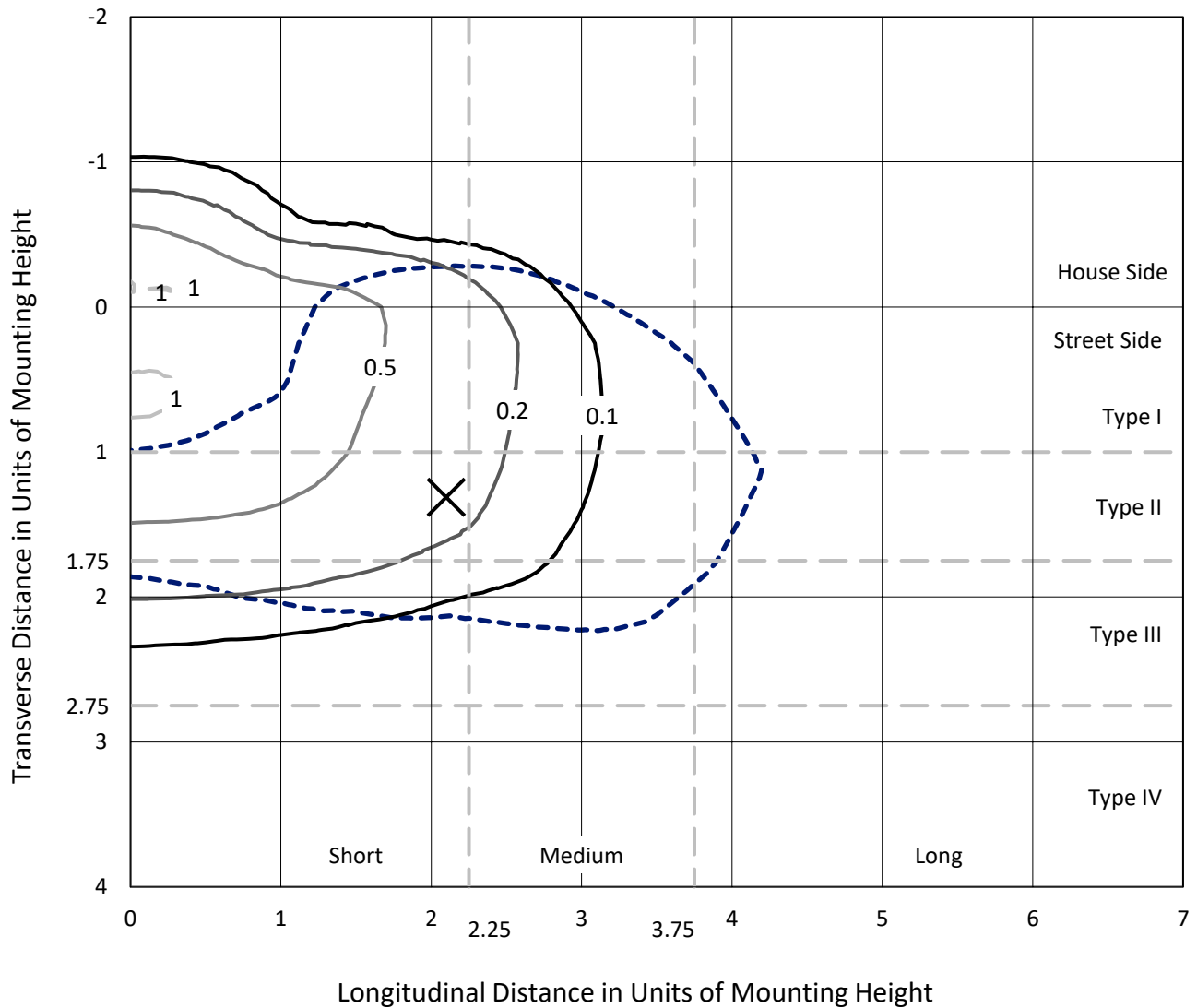
Input Watts (W): 29.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

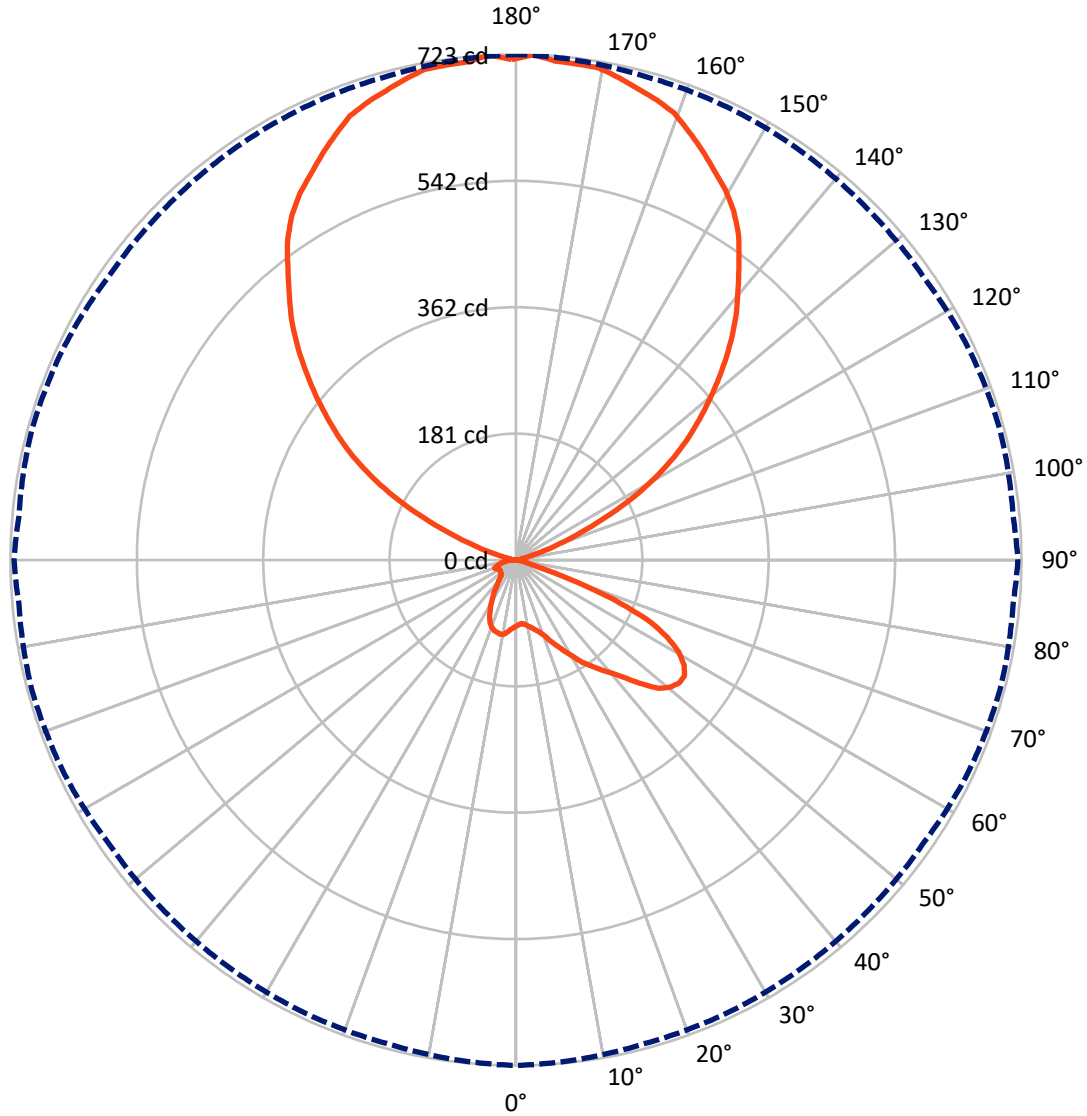
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 177.5-Deg Vertical

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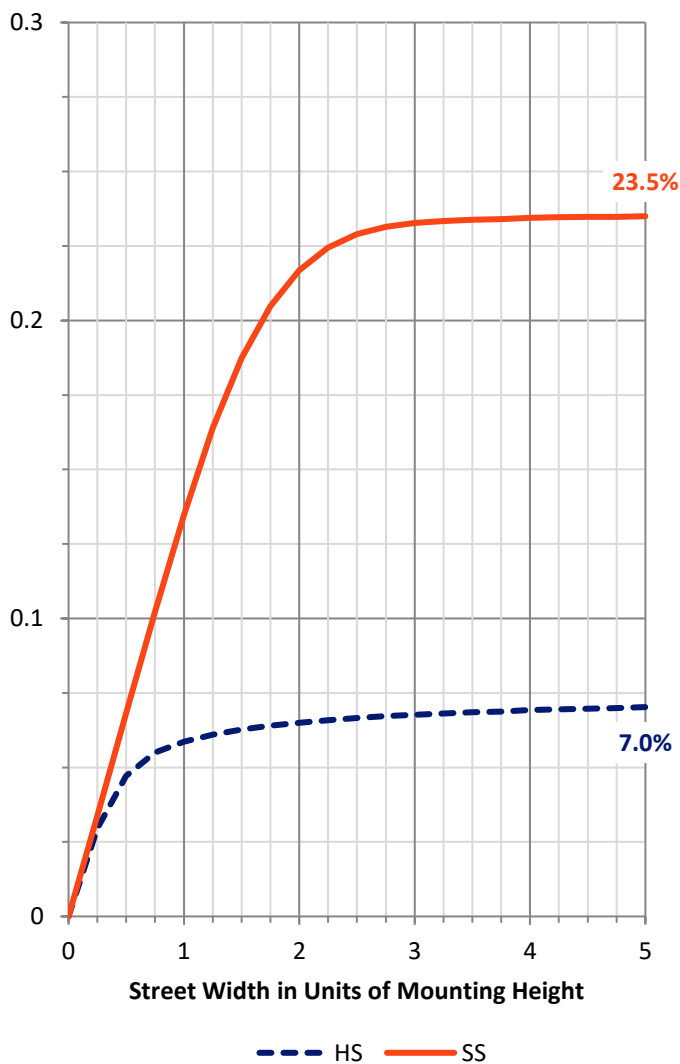
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	184.0	887.0	1071.0
	% Fixture	7.2	34.6	41.8
Street Side	Lumens	602.0	887.0	1488.9
	% Fixture	23.5	34.6	58.2
Total	Lumens	786.0	1773.9	2559.9
	% Fixture	30.7	69.3	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.3	0.4
10°-20°	30.4	1.2
20°-30°	54.7	2.1
30°-40°	80.3	3.1
40°-50°	117.8	4.6
50°-60°	176.1	6.9
60°-70°	205.9	8.0
70°-80°	101.5	4.0
80°-90°	9.9	0.4
90°-100°	8.4	0.3
100°-110°	58.7	2.3
110°-120°	169.9	6.6
120°-130°	279.4	10.9
130°-140°	344.6	13.5
140°-150°	352.5	13.8
150°-160°	297.0	11.6
160°-170°	195.5	7.6
170°-180°	67.8	2.6
0°-90°	786.0	30.7
0°-180°	2559.9	100.0



REPORT NUMBER:

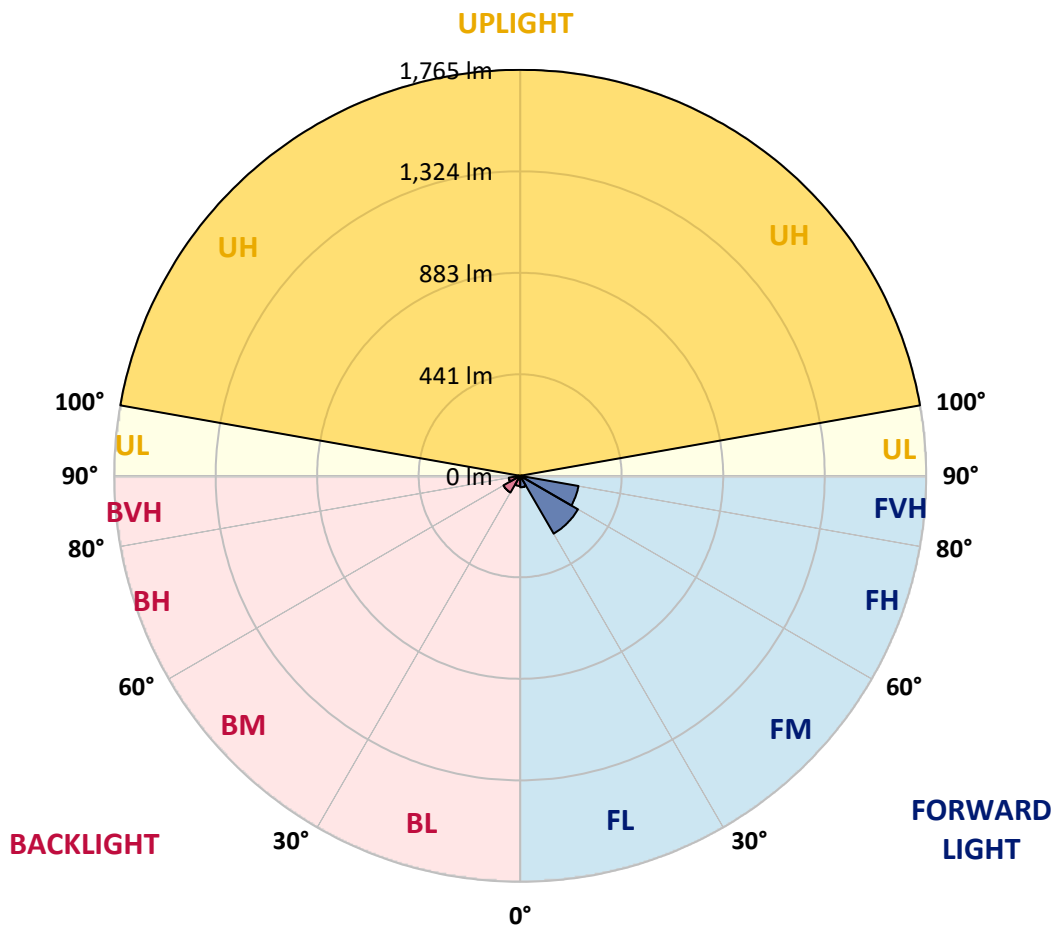
CATALOG NUMBER: ENT-SA1-740-U-T3-ULG-XXB

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	50.1	2.0			
FM (30°-60°)	290.3	11.3			
FH (60°-80°)	257.3	10.1			G0/660
FVH (80°-90°)	4.3	0.2			G0/10
BL (0°-30°)	44.3	1.7	B0/110		
BM (30°-60°)	83.9	3.3	B0/220		
BH (60°-80°)	50.1	2.0	B0/110		G0/110
BVH (80°-90°)	5.6	0.2			G0/10
UL (90°-100°)	8.4	0.3		U1/10	
UH (100°-180°)	1765.5	69.0		U5	

BUG Rating: B0-U5-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4
2.5°	92.1	92.1	92.4	92.5	92.7	93.0	93.2	93.3	93.6	94.1	94.3
5°	91.3	91.4	91.6	91.8	92.1	92.5	92.9	93.1	93.6	94.5	95.0
7.5°	93.1	93.4	93.5	93.6	93.7	94.1	94.1	94.2	94.7	95.6	96.4
10°	95.9	96.1	96.5	96.8	97.1	97.4	96.7	96.8	97.0	97.9	99.0
12.5°	99.5	99.5	99.7	100.1	100.4	101.1	100.4	100.4	100.4	101.2	102.5
15°	103.6	103.4	103.4	103.8	103.9	104.4	104.0	104.0	104.5	105.3	106.6
17.5°	108.2	108.5	108.2	108.0	107.7	107.9	108.1	108.3	109.2	110.4	111.2
20°	114.9	115.5	115.2	114.4	112.9	112.3	113.0	113.5	115.2	116.7	116.8
22.5°	125.6	125.2	124.9	123.4	120.5	118.8	118.9	119.5	122.3	124.5	123.4
25°	135.4	135.8	135.8	133.6	129.8	126.2	126.5	126.9	129.6	131.6	128.6
27.5°	147.4	147.2	147.1	144.1	139.6	136.1	134.2	135.1	137.1	137.9	132.1
30°	159.8	160.7	159.8	155.6	151.3	146.9	143.1	142.9	143.9	143.8	136.3
32.5°	174.7	174.0	173.6	168.8	163.4	157.5	152.8	152.0	151.5	150.7	141.3
35°	186.3	187.2	187.2	183.1	176.7	170.9	163.5	162.9	161.6	159.0	147.7
37.5°	199.9	199.6	200.4	195.6	189.2	183.6	176.8	174.9	172.0	168.3	155.4
40°	213.1	213.7	215.4	209.6	203.8	199.4	189.8	186.4	181.9	178.5	166.6
42.5°	231.3	232.0	232.7	227.8	220.9	217.0	202.1	197.8	195.3	194.6	181.4
45°	253.2	254.5	255.1	250.7	246.7	237.3	217.5	213.6	210.8	213.7	201.6
47.5°	274.3	273.6	276.1	276.0	276.5	265.2	239.8	233.9	231.3	238.5	224.8
50°	286.1	287.1	292.6	298.2	306.0	297.9	265.6	259.7	256.6	265.6	252.0
52.5°	292.3	293.6	300.9	316.6	333.2	329.4	296.7	290.1	287.4	296.2	281.2
55°	292.8	293.6	303.5	327.8	354.0	355.2	332.1	325.9	322.2	327.9	313.0
57.5°	283.7	281.4	298.4	329.5	367.2	382.1	371.1	366.6	356.4	362.5	352.5
60°	267.5	269.8	286.5	322.7	372.8	403.0	410.1	403.3	391.5	394.0	395.1
62.5°	242.9	245.8	263.2	306.9	368.3	420.8	446.3	442.9	426.9	425.6	427.6
65°	207.9	206.1	225.4	272.3	347.0	426.7	481.7	480.3	461.3	445.8	446.6
67.5°	149.9	148.3	161.8	210.2	289.4	404.7	500.6	503.8	482.0	454.7	442.9
68°	136.1	133.8	147.3	194.3	274.6	391.9	499.6	505.1	483.6	454.2	438.2
70°	78.4	74.6	87.7	126.8	202.2	329.9	479.4	494.5	480.0	443.5	408.1
72.5°	24.6	24.6	33.9	51.3	99.2	208.8	410.1	435.9	439.0	403.1	339.1
75°	15.4	15.4	17.7	24.3	39.5	88.6	282.9	322.2	348.8	339.4	247.3
77.5°	10.4	10.2	11.7	15.0	22.1	28.4	142.0	174.5	213.4	231.7	144.7
80°	5.7	5.8	7.2	9.0	12.5	13.2	41.7	58.9	93.9	110.1	54.9
82.5°	3.3	3.2	3.5	4.0	5.5	5.7	12.0	14.7	24.6	22.8	14.7
85°	0.0	0.1	0.1	0.1	0.2	0.5	1.5	2.3	3.7	5.2	3.6
87.5°	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	7.2	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.5	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	11.7	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	28.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	50.2	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	73.0	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.9	96.2	92.1	89.0



REPORT NUMBER:

CATALOG NUMBER: ENT-SA1-740-U-T3-ULG-XXB

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.1	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	152.0	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	184.0	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	217.1	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	252.9	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	286.6	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	320.8	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.2	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	386.9	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	422.0	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	454.7	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	484.5	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	512.1	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	541.0	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	570.6	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	594.9	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	611.6	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	626.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	641.9	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	660.0	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	675.0	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	683.6	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	689.0	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	695.4	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	702.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	705.7	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	707.4	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	711.5	715.0	717.1	714.0
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4
2.5°	94.5	94.8	95.4	95.8	96.0	95.8	96.6	96.5	96.7	96.7	96.9
5°	95.5	95.9	96.9	97.5	98.0	98.2	99.1	99.3	99.8	100.0	99.9
7.5°	96.9	97.5	98.7	99.7	100.4	101.0	102.4	103.1	103.7	103.9	104.2
10°	99.5	100.3	101.6	102.8	103.9	104.7	105.9	106.8	107.4	107.7	107.9
12.5°	103.1	103.9	105.6	107.2	108.4	108.9	108.8	108.5	108.5	108.4	108.5
15°	107.1	108.0	110.1	111.6	111.7	110.3	108.3	107.3	107.1	107.1	107.2
17.5°	111.8	112.9	114.3	115.1	113.0	109.5	107.2	106.2	106.0	105.9	105.7
20°	117.2	117.9	118.3	117.2	112.6	108.5	105.9	104.5	103.4	103.3	102.8
22.5°	122.9	122.7	122.2	118.2	111.4	106.2	102.6	100.0	98.6	98.4	98.0
25°	127.1	126.2	124.6	118.4	109.2	102.5	97.4	93.2	91.3	90.4	90.7
27.5°	129.8	128.0	125.1	117.3	105.4	96.8	89.6	84.1	81.3	80.9	81.2
30°	133.1	130.2	125.6	114.6	99.9	88.8	79.4	73.9	72.3	71.6	71.8
32.5°	137.1	133.2	127.0	110.4	93.0	79.5	69.3	65.4	63.7	62.2	62.7
35°	142.2	137.4	129.3	104.5	84.2	69.6	62.0	58.5	55.3	53.8	53.9
37.5°	148.3	142.8	131.3	97.6	74.6	62.1	55.8	51.6	47.6	44.7	44.1
40°	157.9	153.4	132.9	89.9	65.5	56.0	49.6	44.9	41.2	38.2	37.9
42.5°	174.1	166.3	133.0	80.7	57.7	50.7	44.6	39.4	35.2	32.7	32.6
45°	193.1	181.0	130.7	70.8	50.9	45.4	40.1	34.2	31.8	30.2	30.0
47.5°	215.6	197.9	125.7	61.6	45.1	40.3	35.5	31.9	30.2	29.0	29.0
50°	241.2	217.8	120.6	53.7	39.5	36.1	32.8	31.0	29.6	28.5	28.4
52.5°	270.2	241.2	119.0	45.7	34.9	32.3	31.9	30.2	29.1	28.3	28.1
55°	304.8	267.6	120.5	39.4	31.3	30.7	31.4	30.0	29.2	28.0	27.7
57.5°	344.7	293.3	118.9	34.1	28.8	29.3	30.7	30.0	29.3	27.8	27.3
60°	382.4	316.2	107.7	29.7	26.3	27.5	29.9	29.0	28.0	27.7	27.4
62.5°	402.6	323.7	85.8	26.3	24.5	25.8	28.4	27.3	26.7	27.4	27.5
65°	402.8	315.2	63.1	23.8	22.9	24.3	27.0	26.7	27.1	28.9	29.2
67.5°	380.4	289.5	44.6	21.5	21.4	23.0	27.7	29.9	30.2	31.9	31.9
68°	372.7	283.2	41.4	21.2	21.1	23.0	28.2	30.4	30.6	32.3	32.2
70°	330.6	239.4	30.0	19.9	20.5	24.7	31.2	31.9	30.6	32.5	32.4
72.5°	258.4	177.0	22.4	18.4	19.5	24.4	31.4	30.6	28.6	29.1	28.5
75°	174.6	112.8	18.4	16.9	17.3	20.6	28.5	28.9	26.6	26.1	25.5
77.5°	91.4	52.9	14.9	15.0	15.5	17.9	25.5	26.2	24.1	22.8	22.6
80°	33.7	21.0	12.2	13.3	13.5	15.7	21.8	23.0	21.1	20.1	19.9
82.5°	12.3	10.4	10.1	11.6	11.4	13.4	19.1	20.0	17.9	16.9	16.4
85°	3.4	3.8	6.4	9.1	8.9	10.4	15.4	16.1	14.4	11.9	11.5
87.5°	0.2	0.8	2.5	5.4	5.6	6.5	11.1	12.2	10.6	8.8	8.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	6.1	6.1	6.1	7.2	7.2	6.1	6.1	6.1	5.1	4.1	4.1
95°	7.2	7.2	7.2	8.2	7.2	7.2	7.2	7.2	6.1	5.1	5.1
97.5°	8.2	8.2	9.2	10.2	12.3	9.2	9.2	8.2	8.2	7.2	7.2
100°	19.4	19.4	23.5	26.6	29.7	21.5	12.3	10.2	9.2	8.2	8.2
102.5°	38.9	39.9	43.0	48.1	51.1	40.9	27.6	18.4	13.3	11.3	11.3
105°	62.4	62.4	66.5	71.6	73.7	64.4	49.1	36.8	27.6	22.5	21.5
107.5°	88.0	89.0	92.1	96.2	97.2	90.0	74.7	59.3	50.1	43.0	41.9



REPORT NUMBER:

CATALOG NUMBER: ENT-SA1-740-U-T3-ULG-XXB

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5
112.5°	150.4	150.4	152.4	153.4	151.4	146.3	137.1	123.8	108.4	101.3	101.3
115°	182.1	181.1	183.1	186.2	183.1	178.0	171.9	162.6	150.4	142.2	143.2
117.5°	213.8	212.8	214.8	219.9	215.8	209.7	206.6	201.5	193.3	188.2	188.2
120°	248.6	248.6	250.6	255.7	251.6	248.6	242.4	238.3	231.2	228.1	230.2
122.5°	283.4	282.3	284.4	289.5	285.4	283.4	277.2	273.1	267.0	266.0	269.0
125°	317.1	317.1	317.1	322.2	320.2	317.1	312.0	305.9	302.8	300.7	304.8
127.5°	355.0	352.9	353.9	353.9	352.9	347.8	346.8	340.6	336.6	336.6	337.6
130°	388.7	387.7	389.7	389.7	385.7	380.5	378.5	374.4	370.3	369.3	371.3
132.5°	424.5	423.5	423.5	425.5	420.4	414.3	413.3	410.2	402.0	403.0	405.1
135°	461.4	460.3	457.3	458.3	453.2	447.0	445.0	441.9	435.8	435.8	438.8
137.5°	493.1	492.0	486.9	485.9	483.9	478.7	474.6	470.6	469.5	467.5	470.6
140°	522.7	520.7	515.6	513.5	511.5	508.4	502.3	500.2	498.2	496.1	499.2
142.5°	548.3	546.3	545.2	545.2	539.1	537.0	533.0	529.9	528.9	526.8	529.9
145°	572.9	570.8	573.9	574.9	568.8	563.6	562.6	559.6	556.5	558.5	562.6
147.5°	598.4	596.4	599.4	598.4	593.3	588.2	587.2	587.2	584.1	585.1	588.2
150°	624.0	619.9	616.8	613.8	610.7	606.6	606.6	606.6	606.6	605.6	608.7
152.5°	642.4	637.3	632.2	628.1	625.0	624.0	624.0	623.0	622.0	622.0	625.0
155°	655.7	652.6	650.6	645.5	640.4	642.4	644.5	641.4	639.3	639.3	643.4
157.5°	670.0	664.9	664.9	662.9	658.8	659.8	660.8	658.8	657.8	657.8	660.8
160°	681.3	675.1	676.2	679.2	673.1	670.0	670.0	671.1	674.1	675.1	678.2
162.5°	689.5	683.3	685.4	686.4	682.3	678.2	676.2	680.3	684.4	684.4	688.4
165°	697.7	693.6	695.6	692.5	687.4	688.4	688.4	691.5	691.5	693.6	696.6
167.5°	709.9	703.8	703.8	699.7	693.6	700.7	703.8	701.7	699.7	702.8	705.8
170°	717.1	712.0	709.9	704.8	701.7	706.9	708.9	707.9	707.9	711.0	714.0
172.5°	717.1	712.0	709.9	707.9	704.8	705.8	705.8	708.9	711.0	713.0	715.0
175°	715.0	709.9	712.0	711.0	705.8	705.8	706.9	711.0	713.0	714.0	716.1
177.5°	718.1	714.0	717.1	715.0	709.9	711.0	713.0	715.0	716.1	721.2	723.2
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1

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