

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-T2-ULG-XXB**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400788 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-T2-ULG-XXB
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2541.9 lumens
Efficiency: N/A
Efficacy: 85.6 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

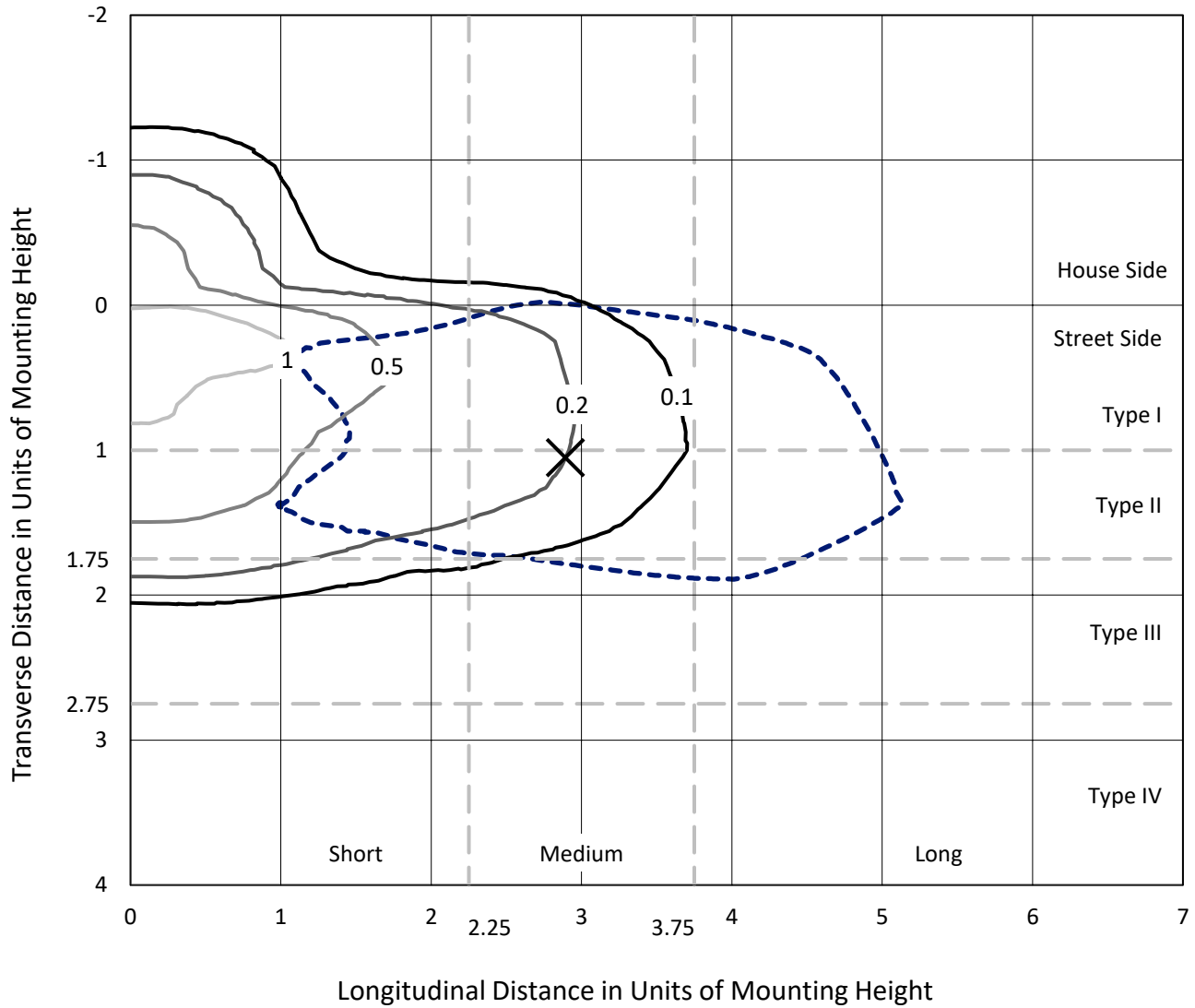
Input Watts (W): 29.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

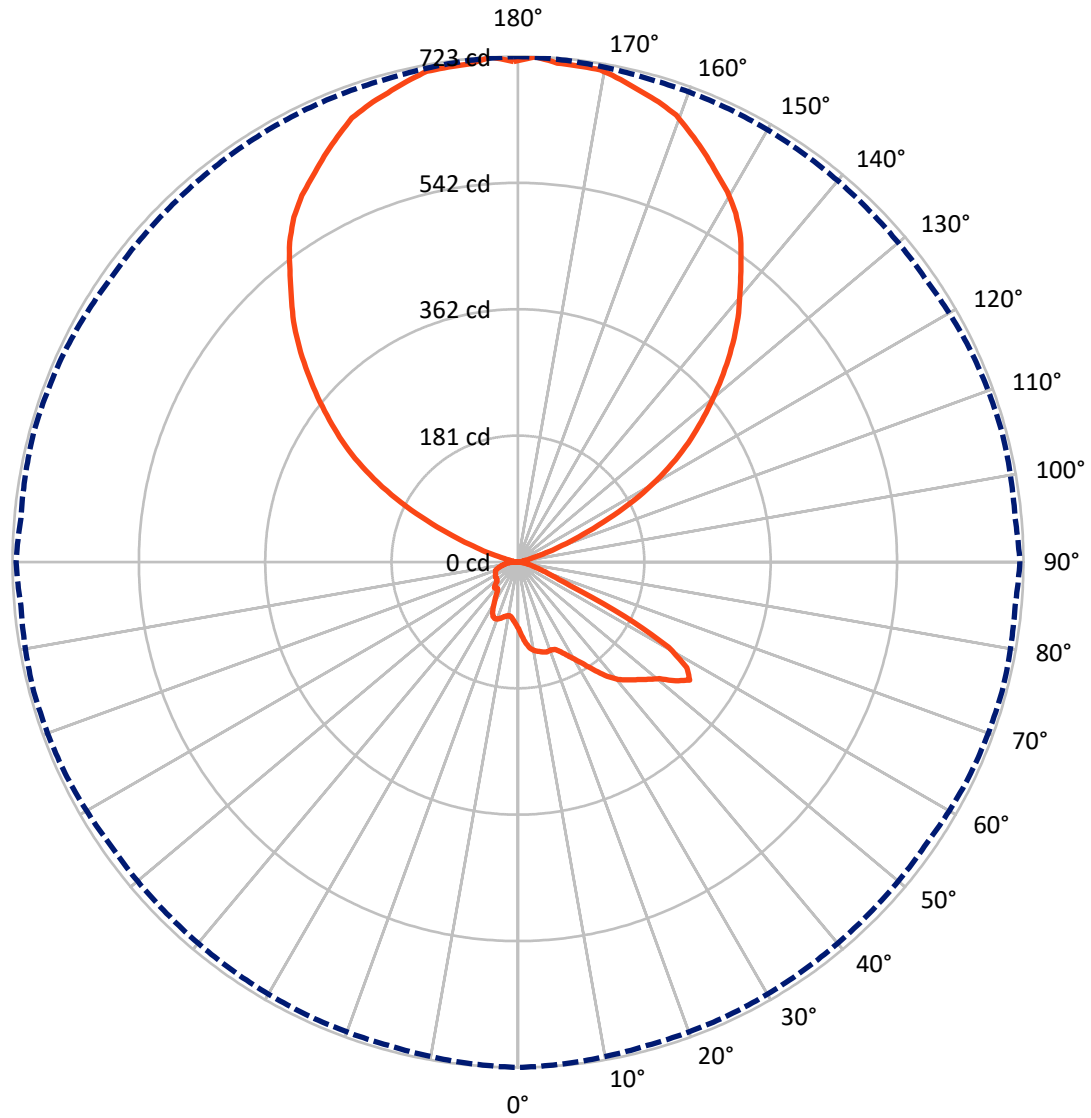
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.3 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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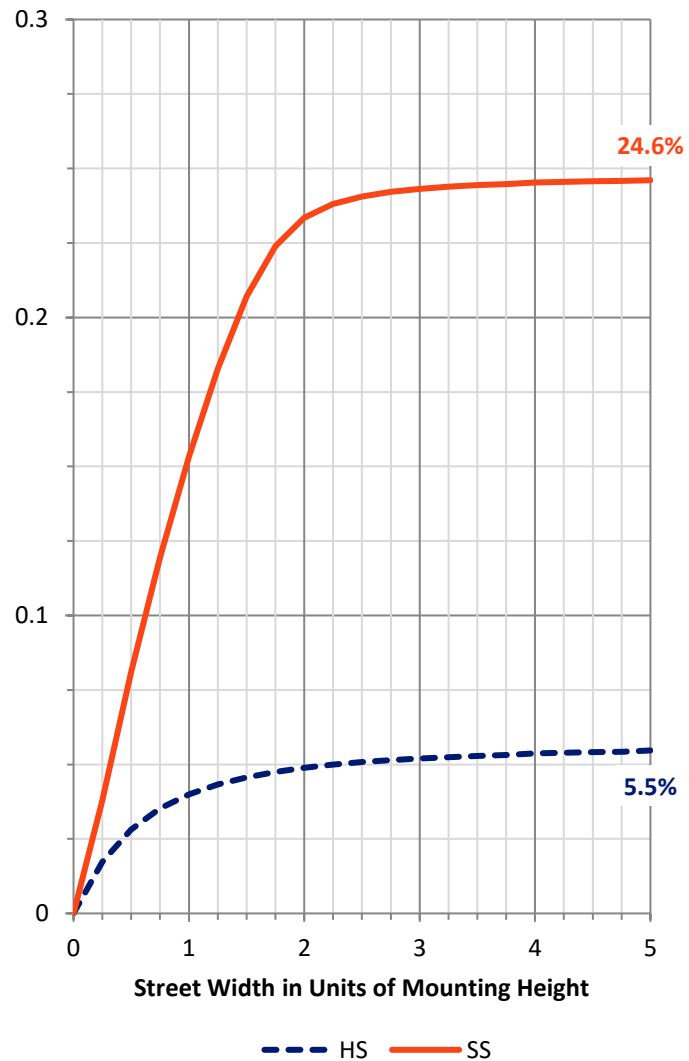
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	142.7	887.0	1029.7
	% Fixture	5.6	34.9	40.5
Street Side	Lumens	625.3	887.0	1512.2
	% Fixture	24.6	34.9	59.5
Total	Lumens	768.0	1773.9	2541.9
	% Fixture	30.2	69.8	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.6	0.4
10°-20°	30.7	1.2
20°-30°	54.3	2.1
30°-40°	80.7	3.2
40°-50°	117.1	4.6
50°-60°	160.0	6.3
60°-70°	175.2	6.9
70°-80°	124.6	4.9
80°-90°	15.6	0.6
90°-100°	8.4	0.3
100°-110°	58.7	2.3
110°-120°	169.9	6.7
120°-130°	279.4	11.0
130°-140°	344.6	13.6
140°-150°	352.5	13.9
150°-160°	297.0	11.7
160°-170°	195.5	7.7
170°-180°	67.8	2.7
0°-90°	768.0	30.2
0°-180°	2541.9	100.0

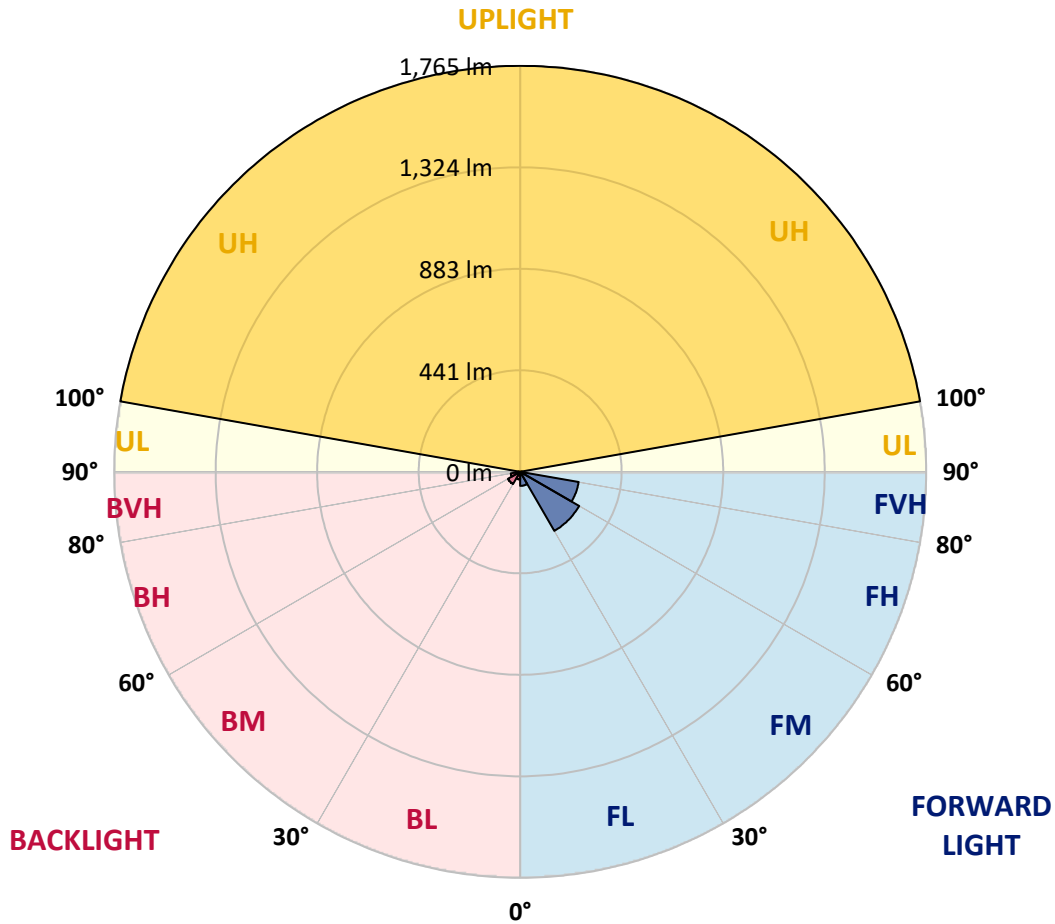


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	61.3	2.4			
FM (30°-60°)	296.5	11.7			
FH (60°-80°)	258.3	10.2			G0/660
FVH (80°-90°)	9.2	0.4			G0/10
BL (0°-30°)	33.3	1.3	B0/110		
BM (30°-60°)	61.4	2.4	B0/220		
BH (60°-80°)	41.6	1.6	B0/110		G0/110
BVH (80°-90°)	6.4	0.3			G0/10
UL (90°-100°)	8.4	0.3		U1/10	
UH (100°-180°)	1765.5	69.5		U5	

BUG Rating: B0-U5-G0
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1
2.5°	105.8	105.2	105.3	104.3	103.8	102.5	101.0	99.5	98.7	98.2	96.3
5°	116.1	116.1	116.5	115.7	113.7	111.5	108.9	105.5	104.1	102.1	98.4
7.5°	124.6	124.8	124.8	124.6	122.8	120.3	117.1	112.9	110.6	107.7	101.9
10°	129.0	129.6	130.0	130.3	130.1	128.7	125.0	120.7	117.5	113.8	106.0
12.5°	131.2	131.4	132.2	133.8	135.2	136.2	133.5	128.5	125.3	120.8	110.4
15°	133.6	133.6	134.4	136.5	139.0	142.0	141.6	137.7	134.3	128.7	116.0
17.5°	135.2	135.6	137.0	139.2	142.7	147.7	150.2	148.0	143.6	137.7	122.0
20°	134.3	134.6	137.5	141.7	146.2	152.6	159.0	159.0	154.8	148.0	128.7
22.5°	135.9	136.5	138.4	142.5	148.6	156.9	167.3	170.9	167.3	159.8	136.5
25°	142.3	142.1	143.7	145.4	150.6	160.8	174.4	183.8	180.5	172.2	144.0
27.5°	151.5	151.5	152.4	152.3	154.1	164.1	180.7	195.0	192.3	182.4	150.3
30°	162.1	162.4	162.1	162.0	161.7	168.6	186.3	205.1	203.7	194.0	156.0
32.5°	175.1	175.6	174.8	172.6	171.2	175.1	191.0	216.4	216.9	205.4	161.6
35°	191.3	192.2	188.9	185.7	182.4	184.2	196.5	227.1	231.5	218.3	168.4
37.5°	207.6	209.0	208.4	199.9	195.3	195.2	204.6	240.4	247.7	235.2	178.0
40°	221.3	222.5	223.1	215.3	209.0	208.8	216.6	254.2	267.7	254.6	189.5
42.5°	230.4	231.5	233.4	228.8	222.9	225.7	229.7	267.9	289.2	278.3	203.5
45°	240.2	241.1	242.3	239.7	236.6	244.5	246.4	283.1	310.7	303.8	220.0
47.5°	250.8	251.7	252.3	250.3	249.2	260.3	262.7	298.7	332.4	330.1	236.0
50°	262.4	262.7	263.4	262.4	262.7	274.7	276.2	312.4	349.6	357.5	252.6
52.5°	282.4	282.8	283.0	278.3	276.7	283.8	287.1	327.0	364.8	380.3	267.3
55°	298.2	299.7	306.6	303.5	299.6	290.3	296.1	338.8	375.5	401.6	282.7
57.5°	285.2	288.7	306.0	320.4	331.5	309.2	306.7	350.8	387.9	419.9	300.6
60°	247.6	252.8	277.8	307.9	343.8	352.8	328.6	365.9	401.4	439.0	319.8
62.5°	171.7	176.9	211.5	259.7	323.1	377.7	388.3	392.5	420.2	458.6	344.8
65°	82.3	87.7	116.2	167.0	255.2	361.7	458.0	447.8	451.8	483.3	381.7
67.5°	52.3	55.2	66.4	90.9	148.4	281.7	483.0	557.9	526.6	540.5	455.0
70°	38.3	38.9	48.6	63.0	88.1	164.6	426.5	663.4	638.8	637.3	543.6
72°	28.3	29.4	36.9	50.2	65.2	96.2	317.4	650.5	686.8	672.3	538.3
72.5°	26.7	27.5	34.0	47.5	61.5	84.5	284.3	635.6	680.9	673.2	528.2
75°	19.4	20.1	23.3	33.8	47.6	48.9	151.8	487.8	578.2	642.7	478.8
77.5°	13.4	13.8	15.5	20.7	32.6	33.1	64.4	333.1	417.3	514.0	368.3
80°	8.1	8.3	9.3	11.3	20.7	19.6	26.5	174.1	217.8	279.4	170.8
82.5°	3.4	3.5	4.1	4.5	8.8	9.3	10.8	56.8	72.1	87.3	49.3
85°	0.0	0.0	0.1	0.1	0.2	1.0	1.5	7.0	10.6	12.7	8.9
87.5°	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.7
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°	4.1	4.1	5.1	6.1	6.1	6.1	7.2	7.2	6.6	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	8.2	7.7	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	10.2	9.7	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	26.6	25.1	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	48.1	45.5	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	71.6	69.0	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.2	94.1	92.1	89.0



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CATALOG NUMBER: ENT-SA1-740-U-T2-ULG-XXB

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.8	122.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	153.4	152.9	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	186.2	184.6	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	219.9	217.4	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	255.7	253.2	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	289.5	286.9	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	322.2	319.7	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	389.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	425.5	424.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	458.3	457.8	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	485.9	486.4	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	513.5	514.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	545.2	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	574.9	574.4	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	598.4	598.9	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	613.8	615.3	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	628.1	630.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	645.5	648.0	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	662.9	663.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	679.2	677.7	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	686.4	685.9	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	692.5	694.1	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	699.7	701.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	704.8	707.4	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	707.9	708.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	711.0	711.5	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	715.0	716.1	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°	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1	95.1
2.5°	95.4	95.0	93.7	92.6	91.7	90.3	90.2	89.1	89.1	88.7	88.5
5°	97.0	95.6	92.9	90.5	88.7	86.7	85.7	84.5	83.7	83.3	83.4
7.5°	99.0	96.5	92.0	88.0	84.7	82.1	80.5	79.5	79.0	78.8	78.8
10°	101.7	98.0	90.6	84.5	80.3	78.3	77.6	77.4	77.6	77.7	77.8
12.5°	104.8	99.0	88.0	80.3	77.0	76.2	76.7	77.7	78.5	78.9	78.9
15°	107.9	99.6	84.4	76.5	74.5	75.3	76.8	78.7	80.1	81.0	81.2
17.5°	111.2	99.7	80.5	73.0	72.3	74.3	77.0	80.0	82.3	83.7	83.9
20°	114.7	99.5	76.0	69.8	70.1	73.4	77.2	81.3	84.4	86.2	86.4
22.5°	118.6	98.6	71.6	66.7	68.2	72.5	77.0	81.7	85.0	87.2	87.7
25°	122.3	96.9	67.2	64.0	66.9	71.6	75.9	80.0	83.2	85.2	85.8
27.5°	124.3	93.1	63.1	61.9	65.9	70.3	73.4	76.1	77.9	79.2	79.8
30°	124.6	87.9	59.7	60.4	64.8	68.5	70.2	70.6	70.3	70.8	70.2
32.5°	124.0	82.2	56.9	59.3	63.1	65.8	66.3	64.9	63.0	60.2	60.3
35°	123.5	75.9	54.7	57.8	60.8	62.5	61.8	59.7	55.9	52.7	52.4
37.5°	124.3	70.2	52.9	55.8	57.8	58.6	57.5	54.7	51.5	48.6	48.3
40°	126.5	66.0	51.1	53.6	54.6	55.2	53.9	51.5	50.1	48.0	47.7
42.5°	130.8	63.2	49.5	51.2	51.7	52.2	50.9	49.3	50.5	50.0	50.0
45°	136.7	61.9	48.0	48.9	49.4	50.2	49.5	48.0	49.4	46.8	46.4
47.5°	144.4	62.3	47.1	46.6	47.9	49.5	48.6	46.8	46.4	41.9	41.1
50°	152.5	64.6	46.1	44.8	46.4	48.5	47.4	44.6	42.0	39.7	39.3
52.5°	162.0	68.5	45.2	42.7	44.6	47.4	46.6	43.7	40.9	39.3	38.9
55°	172.6	72.2	44.1	40.3	42.3	47.1	46.8	43.0	39.4	38.6	38.4
57.5°	184.4	75.3	42.8	37.5	40.0	46.1	45.9	41.5	38.9	38.3	38.2
60°	199.2	78.9	40.5	34.3	37.7	44.2	44.0	40.7	38.0	37.4	37.2
62.5°	219.4	85.6	36.5	31.4	35.3	40.9	42.2	39.2	36.5	36.4	36.4
65°	252.6	98.5	32.5	28.9	32.6	37.7	39.9	37.4	35.2	35.8	35.8
67.5°	315.5	116.0	28.3	26.4	29.9	34.7	38.0	35.7	33.8	34.9	34.9
70°	364.0	109.5	25.0	24.1	27.3	31.9	35.4	33.8	32.0	33.9	33.7
72°	332.1	80.2	22.8	22.3	25.1	29.6	33.2	32.0	30.2	31.7	31.3
72.5°	318.8	72.8	22.2	21.7	24.5	29.2	32.8	31.6	29.6	31.2	30.5
75°	278.1	61.4	19.3	19.1	21.7	26.2	29.9	29.3	27.3	28.2	27.5
77.5°	230.2	51.8	16.2	16.7	18.5	23.4	27.0	26.3	24.5	24.4	24.2
80°	107.9	28.9	13.4	13.7	15.6	20.0	23.3	22.8	21.1	20.8	20.5
82.5°	31.3	13.8	10.3	10.5	12.5	16.3	20.0	19.7	18.4	18.1	17.3
85°	5.8	4.5	5.6	6.6	9.1	13.6	18.2	17.8	15.8	14.4	13.3
87.5°	0.3	0.9	1.9	3.2	5.8	10.2	14.7	14.4	12.6	10.9	11.0
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-T2-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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