

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-T4W-ULG-XXB**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P400800 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-T4W-ULG-XXB
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2545.9 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B0 - U5 - G0

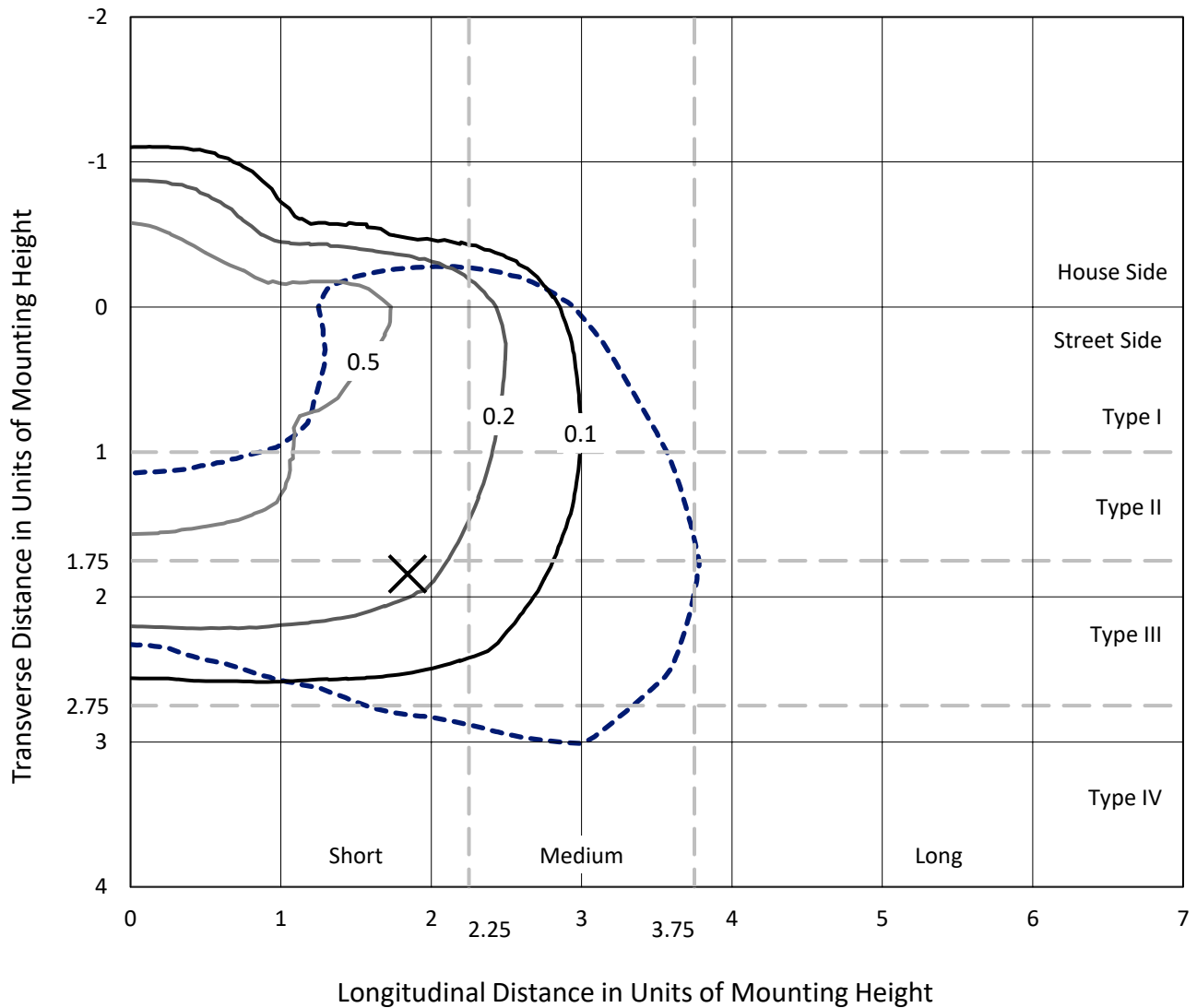
Input Watts (W): 29.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

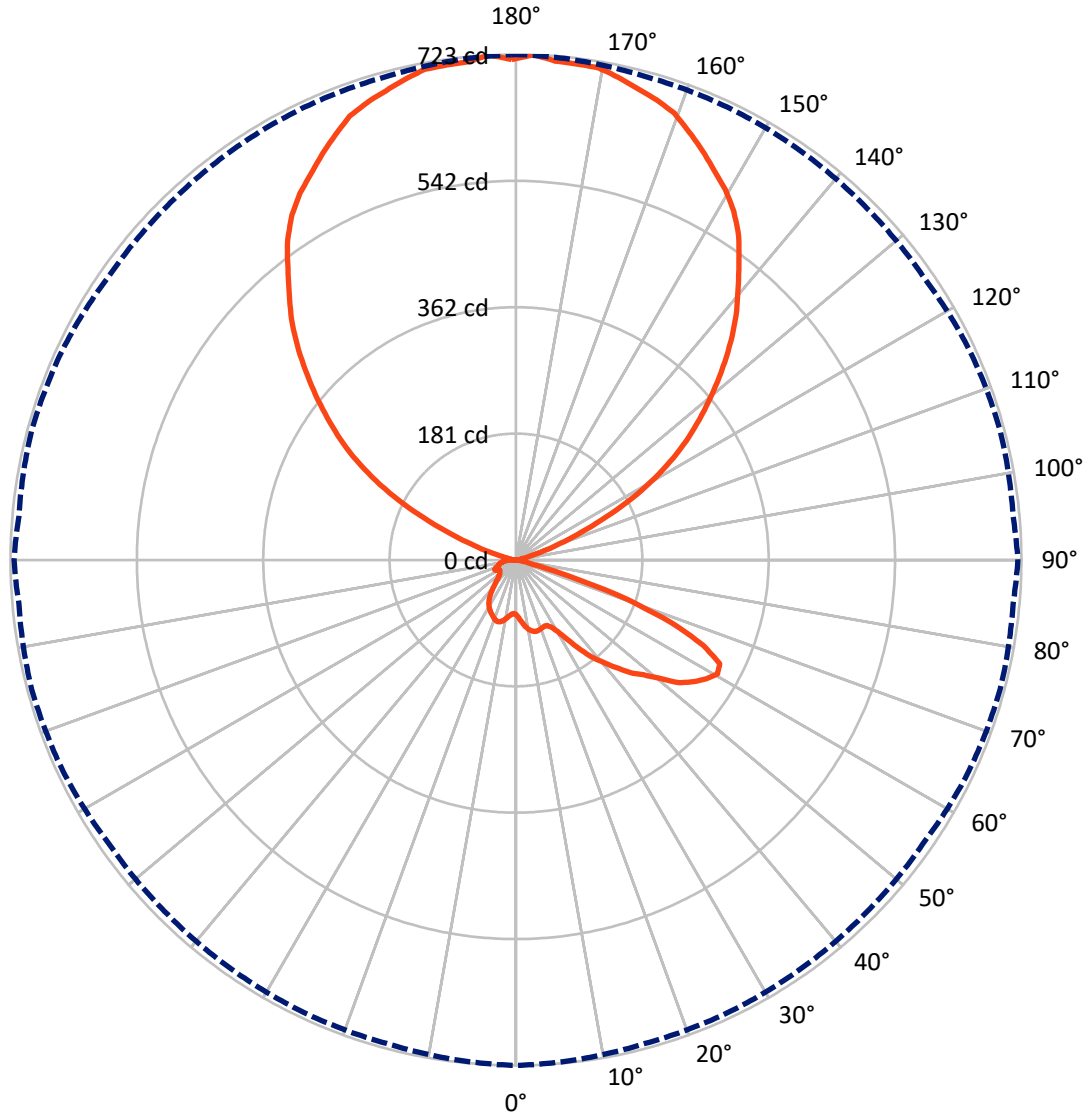
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1 fc
 Type IV - 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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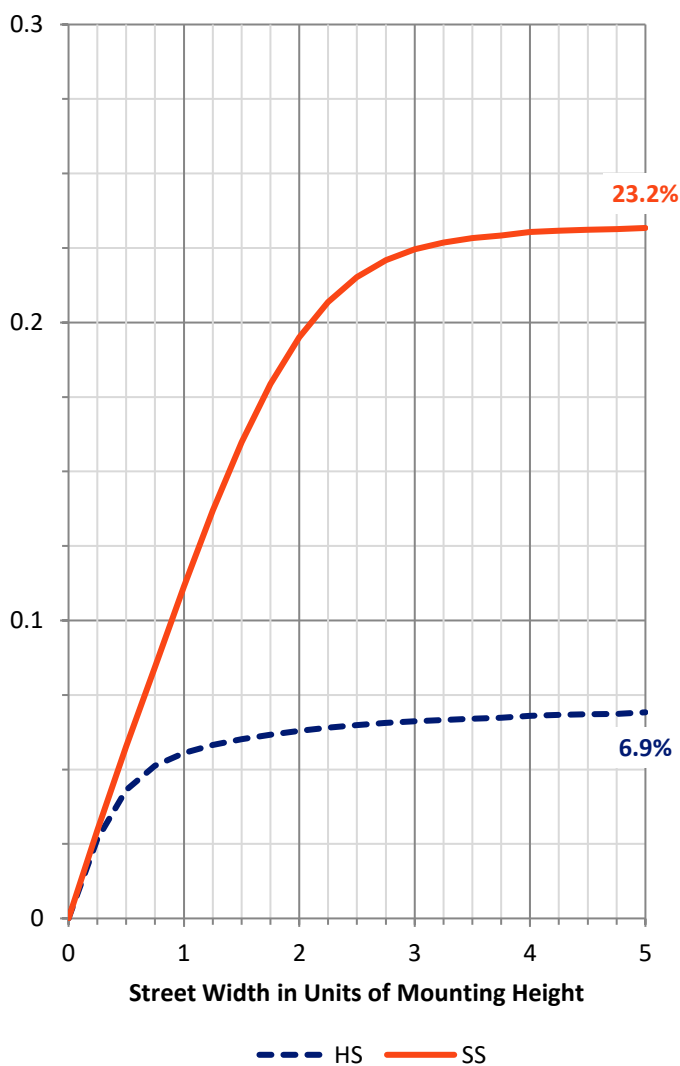
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	181.8	887.0	1068.7
	% Fixture	7.1	34.8	42.0
Street Side	Lumens	590.2	887.0	1477.2
	% Fixture	23.2	34.8	58.0
Total	Lumens	772.0	1773.9	2545.9
	% Fixture	30.3	69.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	8.0	0.3
10°-20°	26.5	1.0
20°-30°	44.7	1.8
30°-40°	64.7	2.5
40°-50°	97.7	3.8
50°-60°	164.7	6.5
60°-70°	226.6	8.9
70°-80°	125.6	4.9
80°-90°	13.7	0.5
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	13.5
140°-150°	352.5	13.8
150°-160°	297.0	11.7
160°-170°	195.5	7.7
170°-180°	67.8	2.7
0°-90°	772.0	30.3
0°-180°	2545.9	100.0

Coefficient of Utilization



REPORT NUMBER:

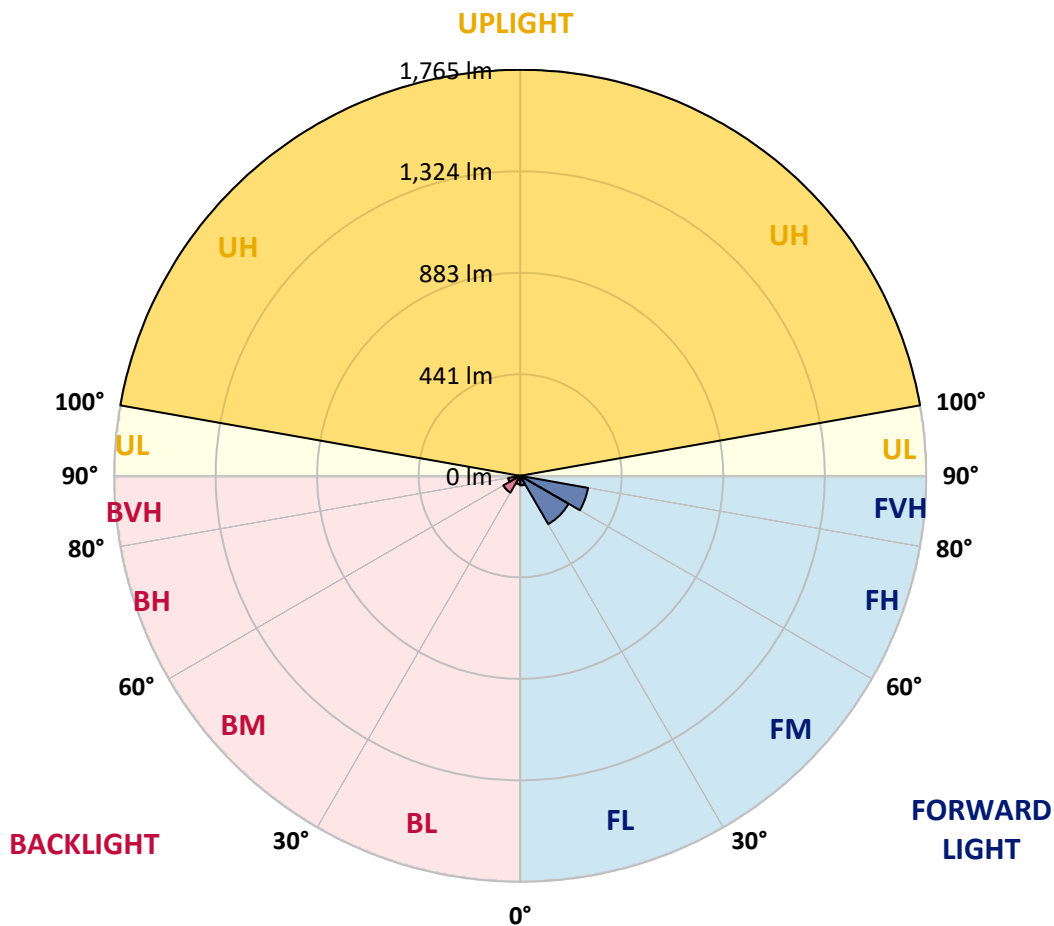
CATALOG NUMBER: ENT-SA1-740-U-T4W-ULG-XXB

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	42.1	1.7			
FM (30°-60°)	242.8	9.5			
FH (60°-80°)	299.4	11.8			G0/660
FVH (80°-90°)	5.8	0.2			G0/10
BL (0°-30°)	37.0	1.5	B0/110		
BM (30°-60°)	84.3	3.3	B0/220		
BH (60°-80°)	52.7	2.1	B0/110		G0/110
BVH (80°-90°)	7.8	0.3			G0/10
UL (90°-100°)	8.4	0.3		U1/10	
UH (100°-180°)	1765.5	69.3		U5	

BUG Rating: B0-U5-G0

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4
2.5°	83.3	83.2	83.3	82.9	82.4	81.8	81.5	80.8	80.2	79.5	78.8
5°	89.4	89.8	89.7	89.1	87.4	86.0	86.0	84.4	82.6	81.0	79.5
7.5°	96.1	96.1	95.5	94.4	92.6	90.7	90.4	88.2	85.7	83.4	81.0
10°	101.0	101.2	100.2	98.7	96.5	94.4	94.2	91.6	89.2	86.3	83.3
12.5°	104.4	104.4	103.5	102.1	99.4	97.5	97.2	94.9	92.4	89.3	85.9
15°	106.1	105.9	105.1	103.6	101.3	99.7	99.3	97.3	95.3	92.2	88.6
17.5°	105.8	105.8	105.1	103.6	102.0	100.6	100.4	99.0	97.5	94.5	90.9
20°	104.4	104.3	104.0	102.8	101.7	101.2	101.0	100.3	99.3	96.8	93.4
22.5°	103.1	102.9	102.6	101.8	101.4	101.7	101.7	101.6	101.5	99.5	96.2
25°	103.8	103.7	103.1	102.0	101.8	103.4	103.5	103.8	104.0	102.4	99.0
27.5°	109.2	108.9	107.0	104.2	103.2	105.1	105.4	106.3	106.1	104.4	101.4
30°	119.7	119.8	115.7	109.5	106.2	107.1	107.2	108.3	108.0	106.6	104.2
32.5°	135.6	135.6	128.8	119.5	111.2	109.4	109.1	110.1	111.4	109.5	107.1
35°	155.8	155.3	147.1	132.7	119.6	113.4	113.1	112.7	115.0	113.3	109.7
37.5°	176.1	174.2	166.2	150.4	131.5	121.1	120.2	118.9	120.2	116.4	113.4
40°	192.5	192.2	185.6	169.6	145.5	130.4	129.7	123.9	124.8	121.8	120.6
42.5°	210.5	210.7	206.3	190.2	162.3	143.0	141.2	132.2	134.8	133.7	133.1
45°	230.3	230.0	226.7	209.8	182.8	160.6	158.4	147.3	152.4	151.8	154.9
47.5°	245.4	246.6	244.7	232.8	207.2	181.9	180.2	166.7	174.5	179.8	185.6
50°	266.0	265.9	260.9	255.9	235.5	209.1	207.4	192.4	203.6	211.3	221.9
52.5°	291.6	290.7	280.3	278.5	270.0	238.8	237.4	221.7	237.7	244.4	266.0
55°	307.6	307.5	302.1	305.2	305.4	272.0	270.2	256.3	274.4	282.1	314.8
57.5°	321.0	321.1	325.6	336.4	343.6	312.2	311.6	294.6	312.9	323.6	362.3
60°	331.3	333.5	346.1	370.7	382.8	363.6	360.7	342.7	355.0	359.3	398.6
62.5°	327.2	330.0	354.8	391.0	422.1	418.0	417.0	391.0	390.9	388.7	425.7
65°	294.2	300.4	339.4	390.3	448.0	473.3	471.9	436.6	424.3	413.3	433.8
67.5°	240.8	242.1	289.2	360.4	447.8	508.1	506.6	469.7	445.0	418.1	410.0
69°	196.0	200.8	244.4	322.7	432.0	515.2	515.2	478.9	444.3	406.6	375.1
70°	169.6	169.8	211.8	292.6	410.5	511.0	512.0	478.9	438.0	391.6	344.2
72.5°	79.5	84.4	111.0	191.0	331.5	469.7	472.1	447.3	401.7	337.4	258.2
75°	23.8	24.7	37.0	90.5	190.0	361.8	367.2	372.2	327.2	248.4	159.0
77.5°	14.2	14.0	17.9	30.7	87.9	214.6	217.0	238.0	212.3	138.1	72.2
80°	6.9	7.1	9.5	14.9	32.9	77.9	85.7	111.3	94.1	54.0	26.4
82.5°	2.3	2.5	4.0	6.0	13.9	25.1	27.8	34.9	30.1	19.6	11.3
85°	0.0	0.0	0.1	0.2	0.8	1.9	1.9	4.2	6.3	6.9	3.7
87.5°	0.0	0.0	0.1	0.1	0.2	0.2	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	6.2	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.2	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	9.5	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	22.3	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	41.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	65.3	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	90.7	97.2	96.2	92.1	89.0



REPORT NUMBER:

CATALOG NUMBER: ENT-SA1-740-U-T4W-ULG-XXB

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	117.2	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	146.8	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	178.5	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	210.3	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	248.9	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	283.6	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	317.4	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	348.3	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	381.0	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	414.9	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	447.6	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	479.2	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	508.7	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	537.2	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	564.1	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	588.7	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	607.0	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	624.1	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	642.2	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	659.7	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	670.3	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	678.6	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.3	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	700.0	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	706.4	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.7	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	710.9	709.9	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°	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4
2.5°	78.5	78.3	77.8	77.4	77.2	76.6	76.7	76.5	76.4	76.4	76.5
5°	78.7	78.4	77.7	77.3	76.8	76.6	77.2	77.4	77.6	77.6	77.7
7.5°	80.0	79.3	78.6	78.0	78.1	78.5	79.3	80.0	80.3	80.6	80.8
10°	82.2	81.4	80.3	80.2	80.4	81.3	82.5	83.5	84.4	84.9	84.9
12.5°	84.5	83.5	82.6	82.9	83.8	85.2	86.4	87.5	88.2	88.8	88.9
15°	87.0	86.0	85.2	85.7	87.4	88.9	90.0	90.4	90.8	91.3	91.4
17.5°	89.3	88.5	87.7	89.1	90.5	91.7	92.1	91.9	91.4	91.7	92.0
20°	91.7	91.0	90.5	92.1	93.1	93.2	92.3	91.3	90.2	90.2	90.3
22.5°	94.7	93.7	93.5	94.3	93.9	92.6	90.4	88.9	87.4	87.1	87.5
25°	97.6	96.6	96.5	95.9	93.1	89.7	86.7	84.9	83.7	83.8	84.5
27.5°	100.4	99.8	99.9	96.9	90.5	85.4	81.4	80.0	80.3	80.6	81.2
30°	103.3	103.3	103.7	96.9	87.0	79.3	75.6	75.5	76.4	77.0	77.8
32.5°	106.6	107.6	106.8	95.7	82.3	73.2	70.2	70.5	71.4	72.5	73.2
35°	109.7	112.1	109.9	93.0	75.8	67.6	65.2	64.9	65.6	66.6	66.9
37.5°	114.8	118.5	112.5	88.7	69.1	62.7	60.3	59.4	58.6	59.4	59.3
40°	123.6	128.1	114.5	81.5	62.7	58.1	55.5	53.9	52.0	50.4	50.4
42.5°	137.6	140.6	115.6	72.9	56.2	53.4	50.9	48.5	45.7	42.7	42.7
45°	160.6	161.2	116.0	63.7	50.3	48.8	46.2	43.9	40.2	37.2	36.5
47.5°	191.2	188.3	117.1	54.8	45.1	44.8	42.6	39.9	35.9	33.1	32.8
50°	232.3	220.0	121.9	47.6	40.9	41.3	39.6	36.5	32.7	30.7	30.3
52.5°	278.6	260.1	125.7	41.9	37.3	38.3	37.1	34.1	30.8	29.2	28.9
55°	329.2	298.6	124.8	38.1	34.6	35.7	35.2	32.7	29.7	28.3	28.0
57.5°	370.5	325.7	117.1	34.7	31.8	33.4	33.8	31.8	29.1	27.8	27.4
60°	401.5	340.5	101.3	31.8	29.6	31.5	32.7	31.3	29.0	28.2	27.9
62.5°	415.5	339.2	80.8	29.6	28.0	30.2	32.8	32.2	30.6	31.2	31.3
65°	407.6	322.7	60.6	28.0	27.0	30.4	34.7	34.7	32.4	33.4	33.5
67.5°	367.1	279.3	44.1	26.8	26.0	31.5	38.2	36.0	31.6	32.4	32.0
69°	328.6	249.9	37.9	26.1	25.2	32.0	39.7	36.2	30.7	31.6	30.7
70°	300.3	223.3	34.0	25.6	24.9	32.0	40.2	36.0	30.3	30.9	30.0
72.5°	213.7	155.1	28.0	24.5	23.7	29.6	39.4	34.8	29.1	28.3	26.4
75°	124.2	85.7	23.8	23.3	21.0	26.0	37.4	33.5	27.9	26.4	25.1
77.5°	52.1	38.3	20.3	21.2	18.5	23.2	35.0	32.2	26.4	24.5	23.8
80°	21.2	19.1	16.9	18.3	16.1	20.4	32.3	30.0	24.4	22.4	21.4
82.5°	11.1	10.5	13.0	14.8	13.4	18.8	30.4	28.4	22.6	20.6	19.4
85°	3.3	4.4	7.4	10.1	10.2	16.9	29.5	26.3	19.6	17.0	16.8
87.5°	0.2	0.9	2.5	5.3	6.7	13.0	23.9	21.6	15.9	13.4	13.5
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-T4W-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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