

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-SL4-ULG-XXB**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400776 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-SL4-ULG-XXB
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2505.9 lumens
Efficiency: N/A
Efficacy: 84.4 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 - G1

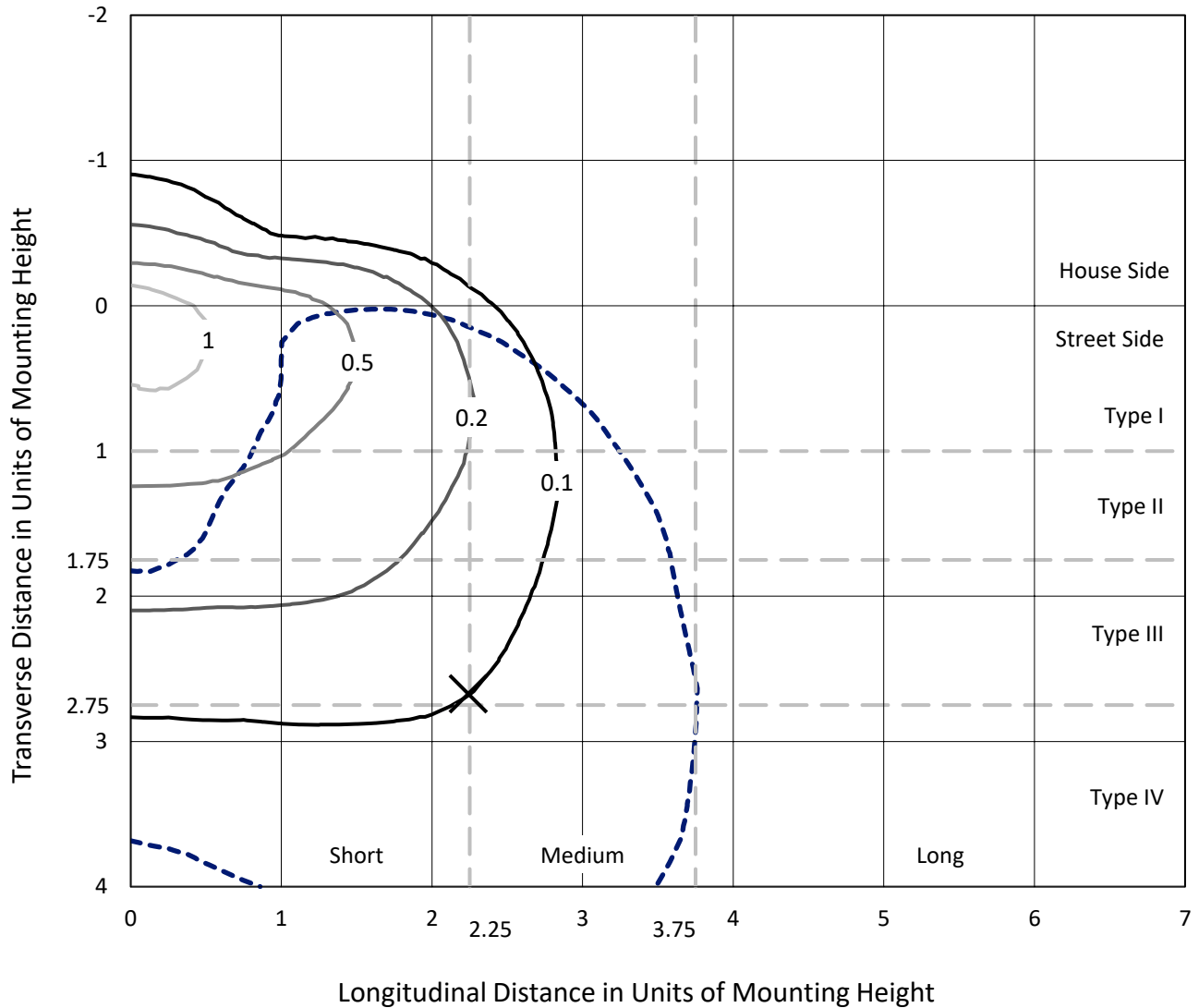
Input Watts (W): 29.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

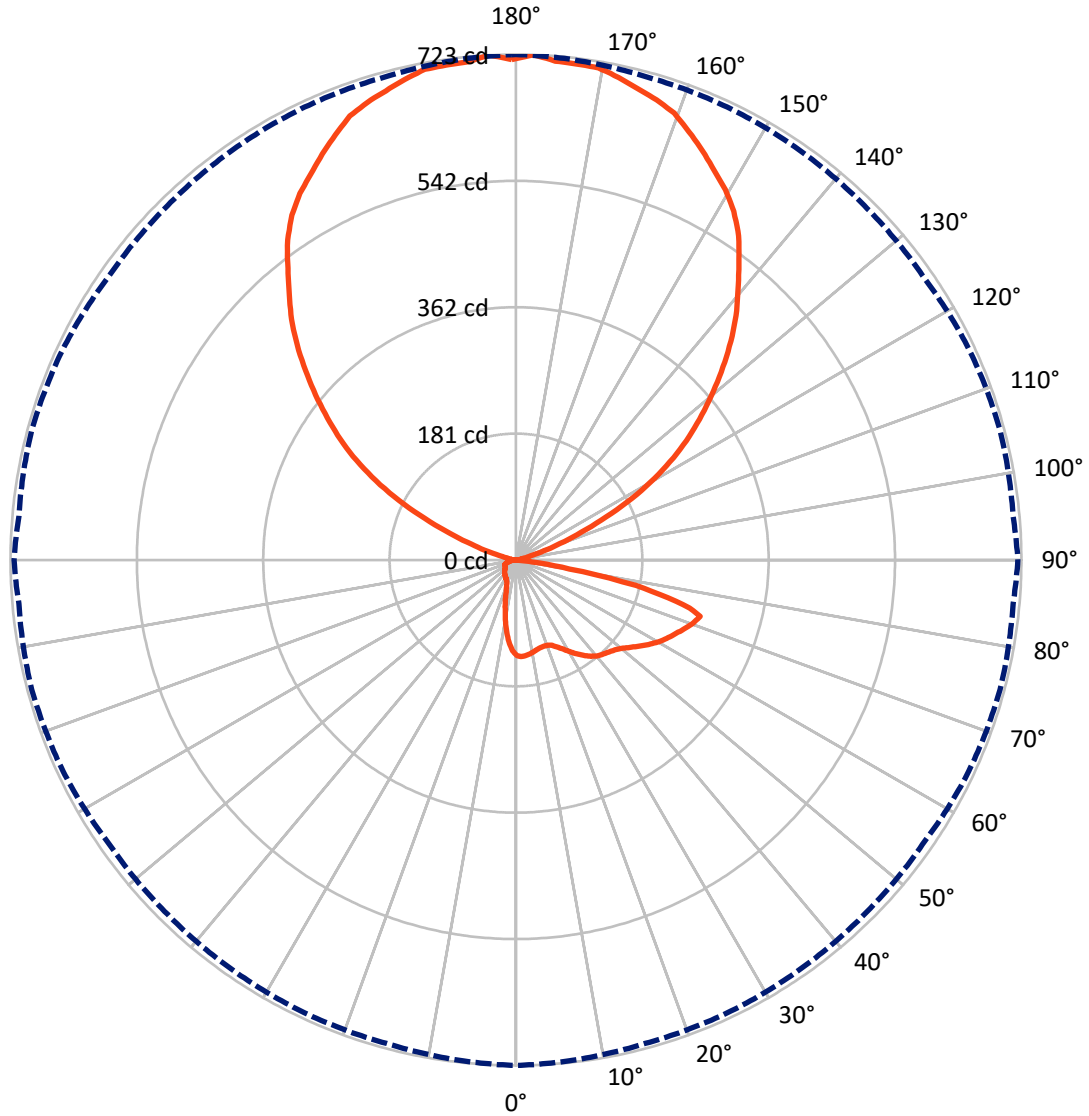
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.4 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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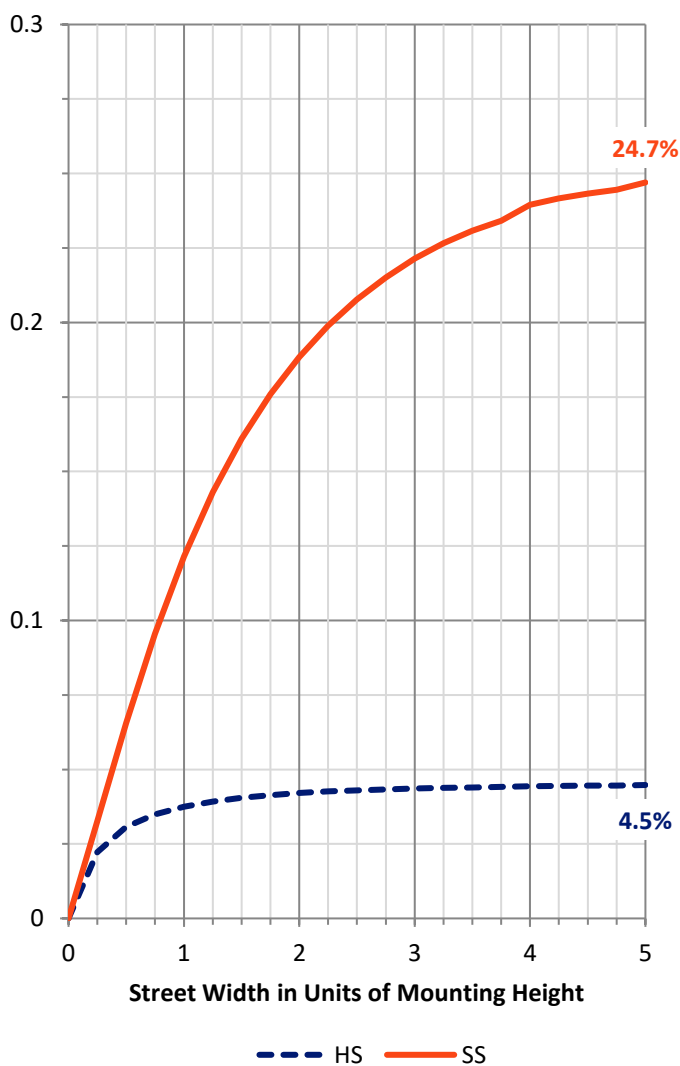
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	114.1	887.0	1001.1
	% Fixture	4.6	35.4	39.9
Street Side	Lumens	617.9	887.0	1504.8
	% Fixture	24.7	35.4	60.1
Total	Lumens	732.0	1773.9	2505.9
	% Fixture	29.2	70.8	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.1	0.5
10°-20°	31.1	1.2
20°-30°	47.6	1.9
30°-40°	68.8	2.7
40°-50°	99.0	4.0
50°-60°	136.7	5.5
60°-70°	172.3	6.9
70°-80°	149.4	6.0
80°-90°	15.0	0.6
90°-100°	8.4	0.3
100°-110°	58.7	2.3
110°-120°	169.9	6.8
120°-130°	279.4	11.2
130°-140°	344.6	13.8
140°-150°	352.5	14.1
150°-160°	297.0	11.9
160°-170°	195.5	7.8
170°-180°	67.8	2.7
0°-90°	732.0	29.2
0°-180°	2505.9	100.0

Coefficient of Utilization

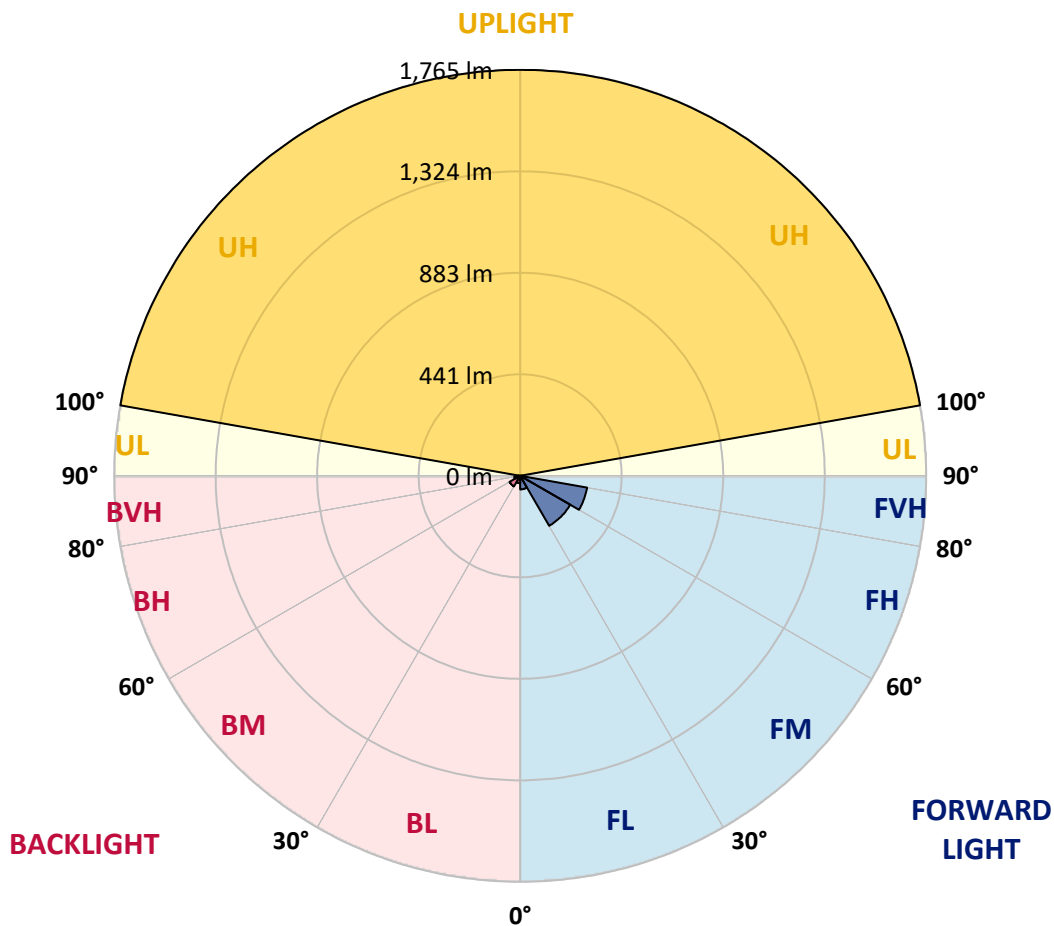


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	59.0	2.4			
FM (30°-60°)	251.2	10.0			
FH (60°-80°)	295.4	11.8			G0/660
FVH (80°-90°)	12.2	0.5			G1/100
BL (0°-30°)	31.8	1.3	B0/110		
BM (30°-60°)	53.3	2.1	B0/220		
BH (60°-80°)	26.3	1.1	B0/110		G0/110
BVH (80°-90°)	2.7	0.1			G0/10
UL (90°-100°)	8.4	0.3		U1/10	
UH (100°-180°)	1765.5	70.5		U5	

BUG Rating: B0-U5-G1
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	136.6	136.6	136.6	136.6	136.6	136.6	136.6	136.6	136.6	136.6	136.6
2.5°	138.4	138.3	138.6	138.4	138.1	137.8	137.7	137.1	136.9	136.2	135.3
5°	137.8	137.8	137.8	137.6	137.0	136.7	136.5	135.5	134.9	133.8	132.1
7.5°	136.0	136.3	136.2	136.1	135.5	135.3	135.0	133.8	132.9	131.3	129.2
10°	134.2	134.2	134.3	134.8	134.6	134.7	134.6	133.2	132.0	129.9	127.3
12.5°	131.7	132.1	132.8	134.0	134.6	135.0	135.0	134.0	132.7	130.2	127.1
15°	130.2	130.7	132.4	134.6	135.9	136.6	136.9	135.6	134.0	131.5	128.1
17.5°	129.5	130.2	133.2	136.3	138.6	139.3	139.4	138.1	136.3	133.2	129.3
20°	130.2	130.9	135.0	139.2	141.9	142.5	142.7	140.8	138.6	135.6	130.5
22.5°	132.7	133.8	138.3	142.8	145.6	146.4	146.2	143.6	141.4	138.2	132.0
25°	138.2	138.8	142.9	147.7	149.9	150.8	150.2	147.3	144.4	141.2	134.2
27.5°	144.5	145.4	149.7	153.3	154.7	155.0	154.4	151.3	148.2	145.5	137.6
30°	152.2	153.0	156.5	159.2	159.4	159.5	159.1	155.6	153.0	150.9	142.6
32.5°	160.3	160.5	164.1	165.4	164.5	164.8	164.5	160.7	158.8	158.1	149.0
35°	167.8	167.9	171.6	172.1	170.7	170.8	171.4	166.9	166.9	168.5	158.7
37.5°	174.9	175.3	178.6	178.1	177.6	178.6	179.4	175.6	177.8	182.2	170.4
40°	180.3	181.1	185.5	185.3	186.5	187.5	188.2	186.2	189.8	198.3	184.9
42.5°	183.8	185.4	191.6	193.2	195.2	197.0	198.3	198.2	204.4	216.2	200.3
45°	187.5	189.0	197.3	201.1	204.6	207.3	209.8	211.2	220.9	235.1	218.2
47.5°	191.8	193.2	202.5	209.8	214.3	218.1	222.6	225.4	237.8	254.3	234.8
50°	198.5	199.4	207.8	219.2	224.9	230.0	235.6	241.4	256.0	273.9	249.2
52.5°	207.2	207.8	213.9	228.6	237.7	243.2	251.5	259.2	274.6	291.7	261.1
55°	217.1	216.6	221.4	239.9	250.6	258.8	269.1	276.9	294.1	307.2	270.5
57.5°	227.0	226.6	230.4	250.8	266.8	276.5	287.1	295.3	312.0	321.7	277.3
60°	236.4	235.2	240.5	263.5	286.4	297.5	307.1	314.6	328.9	332.1	281.0
62.5°	244.7	244.7	252.4	279.2	309.9	319.9	327.5	332.5	345.1	339.8	279.5
65°	252.4	253.4	264.4	296.8	334.3	344.5	351.1	353.1	361.1	340.1	267.5
67.5°	261.1	262.6	278.1	317.3	362.4	373.3	379.0	378.3	372.5	335.1	241.6
70°	269.5	272.1	295.1	343.7	397.1	411.8	418.0	405.1	378.4	307.1	200.6
72.5°	275.7	280.0	309.1	370.2	446.8	469.4	466.9	412.4	350.6	253.1	151.8
74°	257.7	264.8	305.2	379.3	464.7	484.5	466.4	397.8	317.2	203.8	107.6
75°	236.7	243.6	285.8	375.7	468.1	477.0	443.8	372.2	284.5	157.9	70.2
77.5°	175.3	180.6	219.5	296.2	370.2	367.5	330.5	252.2	140.1	47.6	29.6
80°	77.4	81.4	108.3	149.0	200.5	199.7	186.0	115.9	45.2	24.9	18.1
82.5°	23.4	23.3	31.2	43.5	76.2	77.6	66.0	39.9	21.6	10.3	8.8
85°	0.1	0.1	0.1	0.1	0.3	2.9	2.4	7.7	4.0	1.9	3.2
87.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
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°	4.1	4.1	5.1	6.1	6.1	6.1	6.1	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	9.2	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	16.9	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	34.2	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	56.8	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	82.4	90.0	97.2	96.2	92.1	89.0



REPORT NUMBER:

CATALOG NUMBER: ENT-SA1-740-U-SL4-ULG-XXB

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	110.4	116.6	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	141.7	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	175.0	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	208.2	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	245.5	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	280.3	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	314.6	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.3	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	379.5	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	413.8	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	446.0	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	476.6	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	505.4	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	535.0	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.1	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.7	588.2	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	624.0	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	643.4	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	660.3	659.8	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	670.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	677.2	678.2	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.4	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	702.2	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	707.9	706.9	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.8	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	706.3	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	712.0	711.0	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°	136.6	136.6	136.6	136.6	136.6	136.6	136.6	136.6	136.6	136.6	136.6
2.5°	134.8	134.7	134.3	133.6	133.0	131.4	131.9	130.8	130.7	130.5	130.4
5°	131.4	130.9	129.6	128.1	126.3	123.6	122.7	121.1	120.1	119.7	120.0
7.5°	127.9	126.9	124.3	121.1	117.5	113.5	110.5	108.2	106.6	106.0	105.2
10°	125.7	124.0	119.7	114.2	108.5	102.8	97.9	94.5	92.0	90.0	90.0
12.5°	124.9	122.7	116.4	108.4	100.2	92.1	84.9	80.4	76.2	74.1	73.8
15°	125.3	122.3	113.7	103.2	92.2	81.7	72.9	66.4	62.3	59.8	60.7
17.5°	125.8	121.9	110.8	97.6	84.4	72.2	62.0	54.7	49.7	48.4	47.9
20°	126.3	121.3	107.2	91.5	76.4	63.1	52.4	44.9	41.2	39.5	39.5
22.5°	127.1	120.4	103.5	84.8	68.2	54.2	44.2	38.6	35.7	34.7	34.7
25°	128.2	119.8	99.7	78.1	60.4	47.2	38.9	34.5	32.9	32.3	32.2
27.5°	130.3	120.0	95.9	71.3	52.7	41.3	35.0	32.2	30.9	30.6	30.5
30°	133.5	121.1	92.0	64.1	45.9	36.8	32.4	30.4	29.6	29.4	29.4
32.5°	137.8	123.0	88.7	57.6	40.8	33.1	30.2	28.9	28.4	28.2	28.3
35°	144.6	126.4	84.7	51.7	36.1	30.6	28.4	27.4	27.1	27.1	27.2
37.5°	153.5	131.7	80.9	46.2	32.9	28.4	26.8	26.2	25.9	26.1	26.2
40°	164.7	138.0	77.3	41.3	30.3	26.7	25.4	24.9	24.8	25.0	25.2
42.5°	176.8	145.5	74.0	37.2	28.2	25.2	24.1	23.9	23.8	23.9	24.3
45°	190.9	154.2	71.2	34.1	26.7	24.0	23.0	22.8	22.7	22.9	23.2
47.5°	203.8	162.0	69.0	32.0	25.4	23.2	22.2	21.8	21.8	21.8	22.1
50°	214.3	168.1	67.7	30.6	24.3	22.2	21.3	21.0	20.9	20.7	20.9
52.5°	223.4	172.7	67.3	29.7	23.4	21.3	20.4	20.2	20.0	19.8	19.9
55°	229.5	175.0	66.4	29.0	22.6	20.3	19.5	19.3	19.1	18.8	18.8
57.5°	233.0	174.8	64.4	28.5	22.2	19.4	18.7	18.7	18.4	17.9	18.0
60°	233.3	171.0	59.6	28.0	21.8	18.5	17.7	17.9	17.9	17.5	17.5
62.5°	227.7	160.9	50.3	26.6	21.4	17.9	16.9	17.5	17.7	17.2	17.2
65°	210.5	137.1	40.4	24.5	20.3	17.1	16.0	17.1	17.8	17.5	17.3
67.5°	177.5	108.5	33.4	22.2	19.1	16.1	15.1	16.6	17.5	17.5	17.3
70°	142.5	82.4	27.4	19.6	17.2	14.9	14.2	15.4	16.1	16.4	16.4
72.5°	98.1	50.4	22.3	16.9	15.1	13.5	12.8	13.6	14.0	14.5	14.4
74°	63.3	35.3	19.5	15.4	13.8	12.4	12.1	12.4	12.6	13.1	13.2
75°	42.4	28.9	18.2	14.3	13.1	11.6	11.4	11.7	12.0	12.3	12.3
77.5°	24.4	20.6	14.7	11.9	10.9	10.0	9.9	10.0	10.3	10.6	10.5
80°	16.9	15.7	11.6	9.2	8.6	8.1	8.2	8.3	8.9	9.0	8.9
82.5°	10.2	11.3	8.2	6.9	6.5	6.4	6.7	6.9	7.4	7.5	7.4
85°	4.1	5.4	4.1	3.8	4.3	4.7	5.3	5.6	5.8	5.8	5.8
87.5°	0.0	0.8	1.0	1.5	2.4	2.9	3.7	4.1	4.3	4.2	4.1
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-SL4-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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