

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-HSS-ULG-XXB**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400774 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-HSS-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 WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2406.9 lumens
Efficiency: N/A
Efficacy: 81.0 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

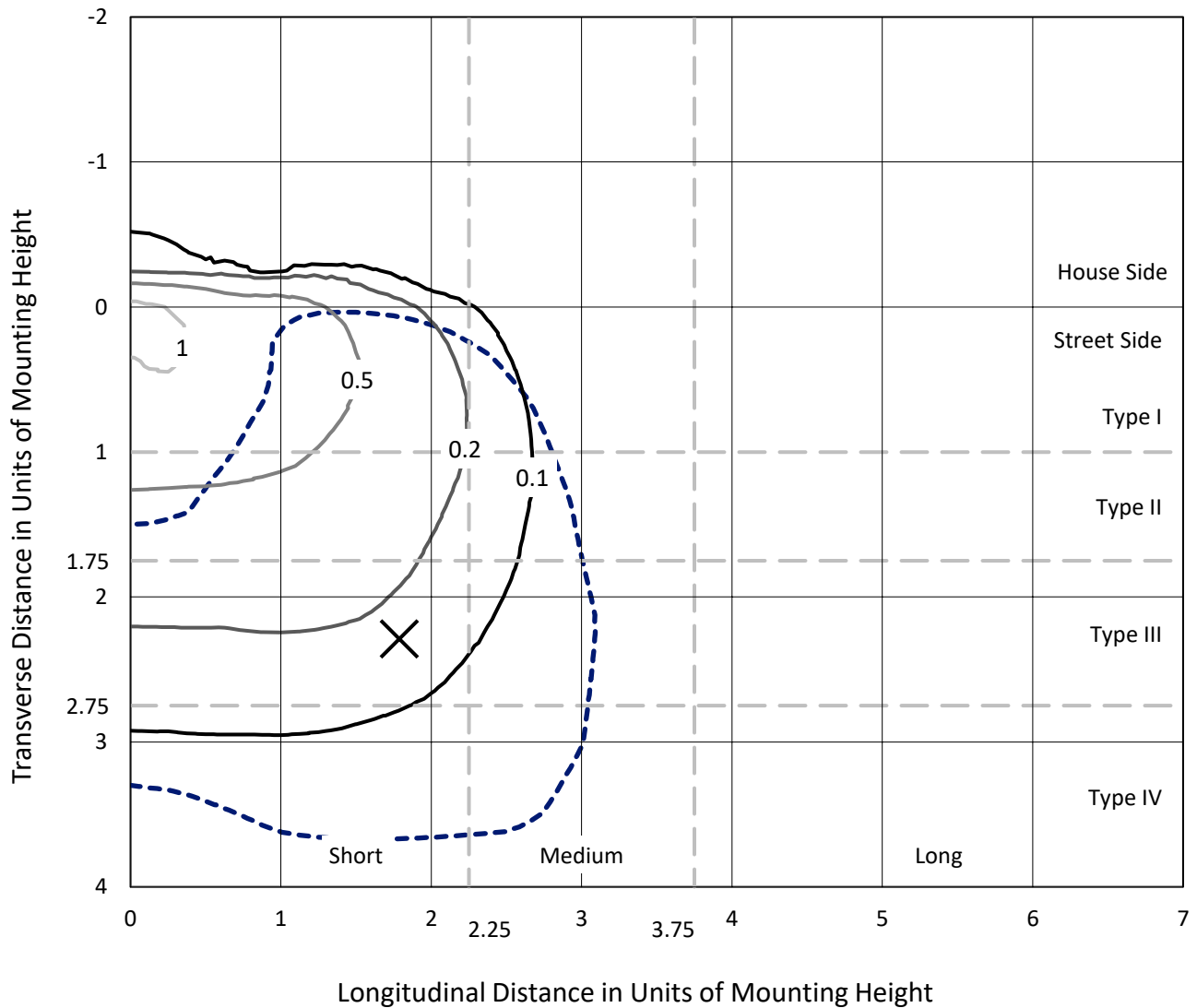
Input Watts (W): 29.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

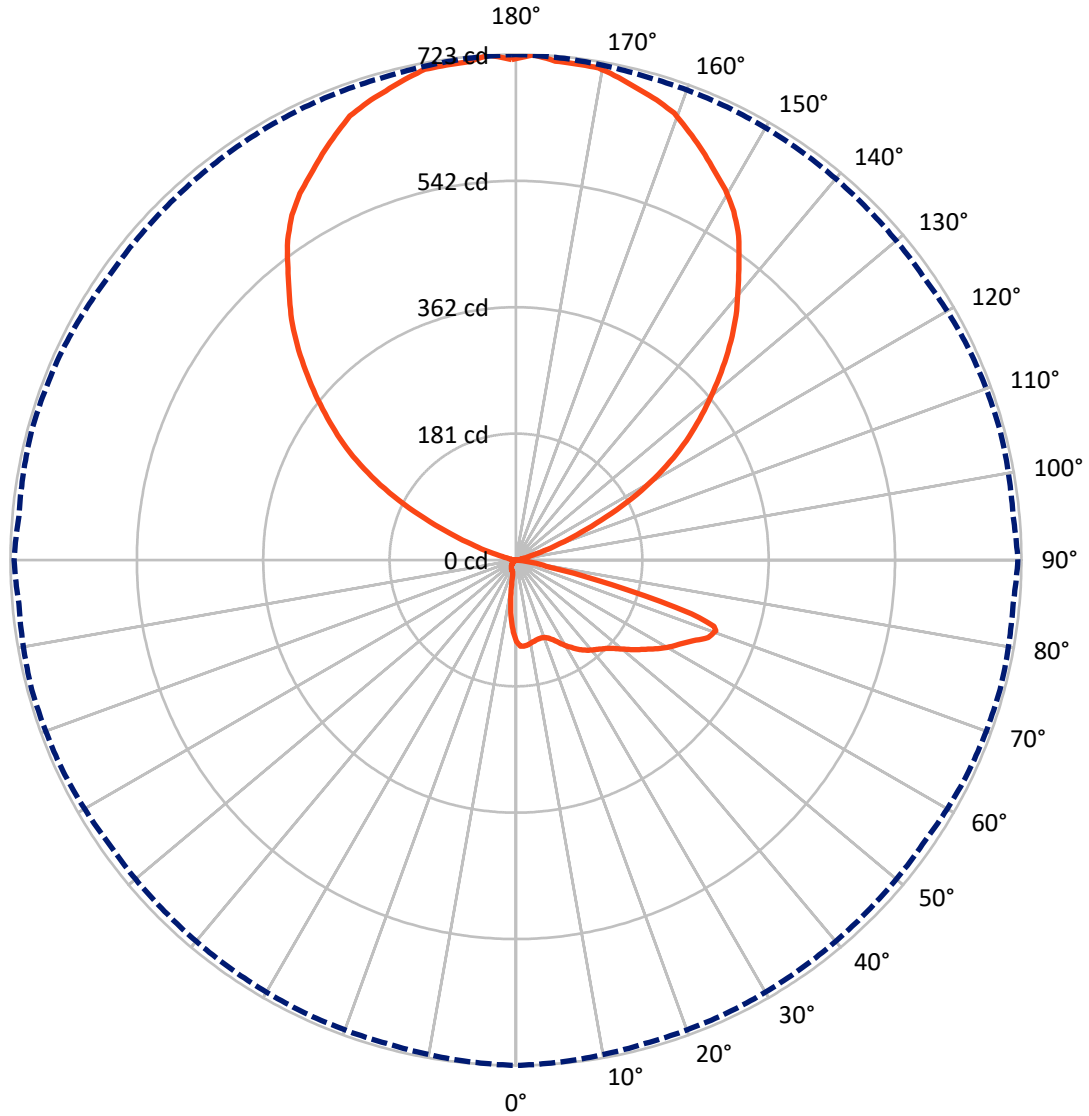
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.2 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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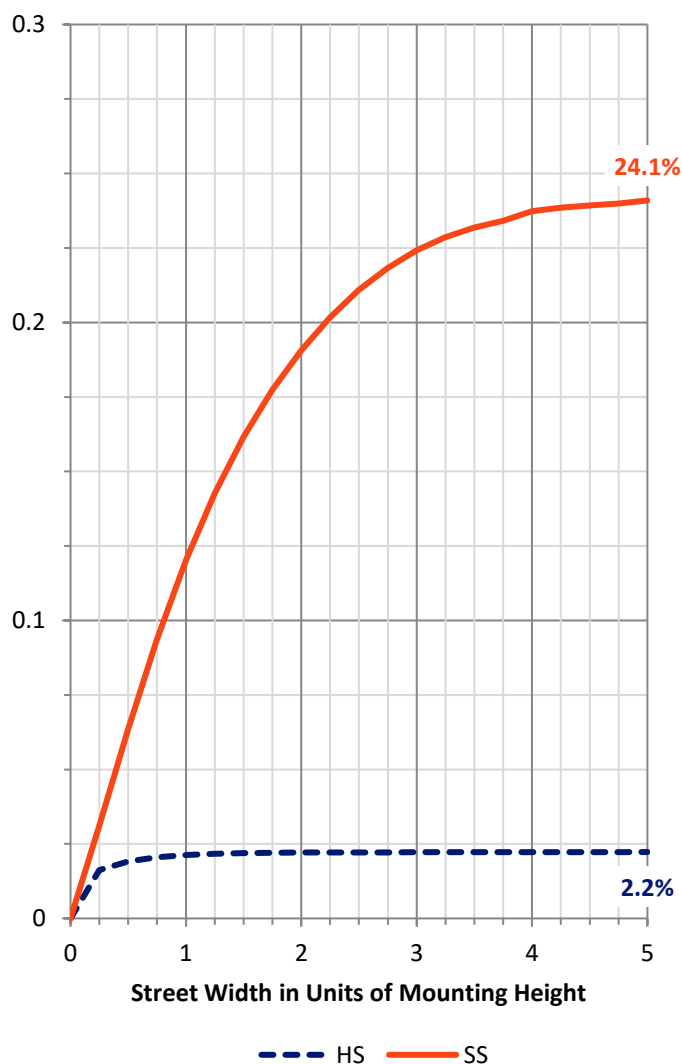
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	54.1	887.0	941.0
	% Fixture	2.2	36.9	39.1
Street Side	Lumens	578.9	887.0	1465.9
	% Fixture	24.1	36.9	60.9
Total	Lumens	633.0	1773.9	2406.9
	% Fixture	26.3	73.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.9	0.4
10°-20°	23.9	1.0
20°-30°	38.3	1.6
30°-40°	58.2	2.4
40°-50°	90.7	3.8
50°-60°	132.7	5.5
60°-70°	170.2	7.1
70°-80°	104.0	4.3
80°-90°	5.2	0.2
90°-100°	8.4	0.4
100°-110°	58.7	2.4
110°-120°	169.9	7.1
120°-130°	279.4	11.6
130°-140°	344.6	14.3
140°-150°	352.5	14.6
150°-160°	297.0	12.3
160°-170°	195.5	8.1
170°-180°	67.8	2.8
0°-90°	633.0	26.3
0°-180°	2406.9	100.0

Coefficient of Utilization



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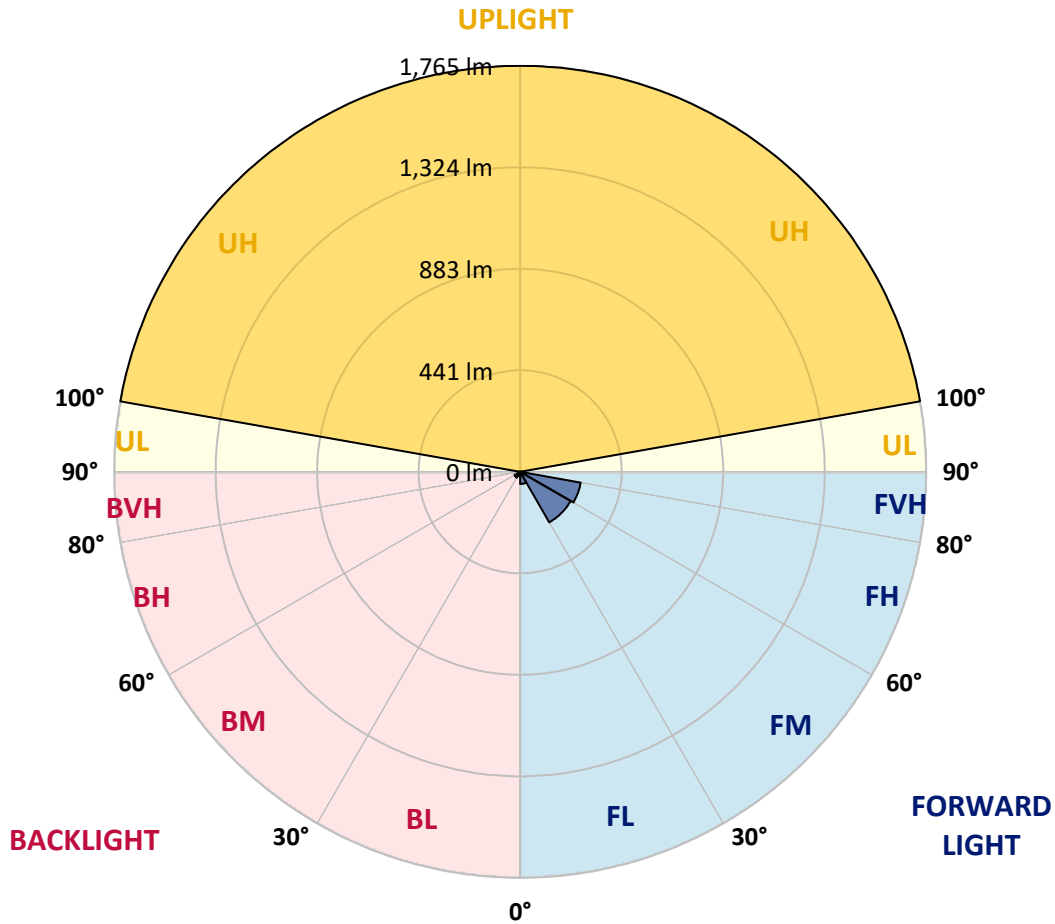
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	53.2	2.2			
FM (30°-60°)	253.5	10.5			
FH (60°-80°)	267.2	11.1			G0/660
FVH (80°-90°)	5.0	0.2			G0/10
BL (0°-30°)	18.8	0.8	B0/110		
BM (30°-60°)	28.1	1.2	B0/220		
BH (60°-80°)	6.9	0.3	B0/110		G0/110
BVH (80°-90°)	0.2	0.0			G0/10
UL (90°-100°)	8.4	0.4		U1/10	
UH (100°-180°)	1765.5	73.4		U5	

BUG Rating: B0-U5-G0

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	116.7	116.7	116.7	116.7	116.7	116.7	116.7	116.7	116.7	116.7	116.7
2.5°	123.6	123.3	123.6	123.3	122.6	122.3	121.8	120.6	119.5	118.2	116.3
5°	123.8	123.6	123.6	123.2	122.4	122.1	121.6	120.4	119.0	117.0	114.1
7.5°	122.6	122.5	122.3	121.8	121.0	120.8	120.4	119.0	117.6	115.5	111.9
10°	120.6	120.9	120.8	120.8	120.4	120.2	120.0	118.3	116.8	114.4	110.6
12.5°	118.8	119.0	119.5	120.4	120.8	120.9	120.9	119.2	117.4	114.7	110.8
15°	117.6	118.0	119.5	121.3	122.3	122.6	122.9	121.2	119.0	116.1	112.0
17.5°	117.2	117.9	120.9	123.6	125.5	125.7	125.7	123.5	121.2	117.9	113.4
20°	118.3	119.2	123.1	126.9	129.2	129.4	129.0	126.1	123.4	119.8	114.6
22.5°	121.6	122.4	126.8	131.3	133.5	133.7	132.7	128.8	125.8	122.8	116.3
25°	127.3	127.8	132.5	136.8	138.0	138.3	136.7	131.9	128.5	125.8	118.6
27.5°	134.9	135.1	139.4	142.6	142.8	142.7	140.9	136.0	132.6	130.3	122.1
30°	142.8	143.1	146.6	148.7	147.8	147.4	145.9	140.6	137.5	135.8	127.1
32.5°	150.1	150.5	154.3	155.4	153.4	153.1	152.0	146.4	143.8	144.7	134.4
35°	157.4	157.4	161.8	162.3	160.6	160.6	160.6	153.9	153.4	156.4	144.4
37.5°	163.9	165.0	169.6	169.3	169.0	169.2	169.9	164.8	166.4	171.4	157.7
40°	169.3	170.8	176.9	177.5	178.9	180.1	181.1	178.4	182.1	190.3	174.7
42.5°	174.3	175.9	183.8	186.3	190.3	191.9	193.8	193.1	201.1	216.2	196.4
45°	180.6	182.4	190.5	196.5	202.0	204.2	208.4	211.2	224.5	241.6	219.9
47.5°	189.1	190.3	197.7	207.3	214.7	218.7	225.2	232.5	248.6	268.6	240.8
50°	200.6	200.7	206.3	218.7	229.8	234.0	245.2	254.8	275.0	292.4	256.0
52.5°	213.3	212.7	217.0	232.7	246.8	252.6	265.7	279.0	299.3	309.6	262.8
55°	225.4	225.7	228.5	247.6	268.2	273.8	290.4	303.9	321.6	320.1	266.5
57.5°	239.3	239.2	242.7	264.0	293.2	299.6	317.1	328.1	335.1	327.7	267.2
60°	252.5	252.1	257.5	283.5	319.8	329.4	345.0	344.6	348.5	332.5	266.6
62.5°	264.2	265.0	274.4	306.2	349.6	360.0	367.9	362.4	363.5	338.1	259.8
65°	278.5	279.9	295.1	333.7	386.5	391.4	394.5	385.6	374.7	333.6	239.2
67.5°	296.5	300.7	322.2	374.3	424.9	428.3	428.4	399.7	374.2	310.9	201.1
70°	303.6	308.1	342.3	406.5	457.2	461.5	448.1	397.5	344.7	243.5	135.8
71°	298.6	302.7	341.7	409.5	463.9	467.3	446.4	383.1	312.6	200.6	105.2
72.5°	263.0	273.5	320.7	390.2	452.0	452.1	418.0	349.2	248.6	125.2	52.9
75°	142.0	154.8	235.0	297.0	348.7	351.4	321.6	242.5	120.3	32.5	12.8
77.5°	46.8	52.8	105.4	154.2	218.7	223.0	196.6	107.7	37.9	11.0	6.7
80°	29.4	30.1	35.6	64.8	97.3	100.9	80.9	43.7	17.1	6.0	4.6
82.5°	4.9	5.9	16.8	19.1	34.3	27.2	18.4	22.3	8.0	2.7	3.9
85°	0.0	0.0	0.1	0.1	0.5	0.1	0.1	4.5	0.4	0.4	2.1
87.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	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	15.1	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	31.6	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	53.7	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	79.3	90.0	97.2	96.2	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	108.0	116.6	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	139.9	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	173.7	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	207.5	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	244.3	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	279.1	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	313.5	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.1	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	379.1	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	413.6	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	445.6	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	475.8	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	504.1	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	534.2	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	562.9	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.5	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	643.9	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	660.5	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	676.8	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	702.9	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	708.3	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	706.6	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	712.4	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°	116.7	116.7	116.7	116.7	116.7	116.7	116.7	116.7	116.7	116.7	116.7
2.5°	115.4	114.5	112.7	110.9	108.6	106.6	105.9	104.5	103.9	103.3	103.3
5°	112.2	110.7	106.9	103.1	99.4	95.4	91.8	88.4	86.8	84.5	85.5
7.5°	109.6	106.9	101.7	95.6	88.0	80.2	74.1	68.9	64.5	63.1	62.1
10°	107.7	104.4	96.7	87.5	76.3	65.3	55.9	47.3	42.2	39.2	39.2
12.5°	107.5	103.3	93.3	79.2	63.1	48.0	36.5	28.3	24.2	22.4	22.3
15°	108.2	103.2	90.3	71.6	50.9	33.3	22.8	19.2	18.2	18.0	18.0
17.5°	108.9	103.1	86.6	63.1	37.5	21.9	18.1	17.4	17.2	17.1	17.1
20°	109.6	102.5	82.5	53.4	26.5	17.9	16.9	16.6	16.5	16.3	16.3
22.5°	110.4	102.0	78.2	42.4	19.6	16.7	16.1	15.8	15.7	15.7	15.7
25°	111.6	101.7	72.9	32.1	16.9	15.8	15.2	15.0	15.0	14.9	14.9
27.5°	114.0	102.0	67.2	23.0	15.8	14.9	14.6	14.4	14.4	14.3	14.3
30°	117.1	103.0	60.1	18.0	14.9	14.0	13.7	13.6	13.5	13.5	13.5
32.5°	121.6	104.5	52.3	15.4	13.8	13.2	12.8	12.7	12.7	12.7	12.6
35°	128.5	107.7	42.8	14.0	12.8	12.2	11.8	11.8	11.8	11.7	11.8
37.5°	139.1	112.9	33.1	12.9	11.7	11.2	11.0	10.9	10.9	10.9	10.9
40°	152.3	121.2	24.1	12.0	10.7	10.2	10.0	9.9	9.8	9.8	9.8
42.5°	169.4	130.4	17.5	10.9	9.9	9.3	9.1	8.9	8.7	8.6	8.6
45°	187.2	141.4	13.7	10.0	9.0	8.6	8.3	8.0	7.7	7.3	7.3
47.5°	204.4	149.8	11.7	9.0	8.2	7.8	7.6	7.1	6.6	6.3	6.3
50°	215.3	152.4	10.5	8.1	7.5	7.1	6.8	6.3	5.5	5.2	5.2
52.5°	218.7	147.6	9.4	7.3	6.8	6.5	6.0	5.3	4.5	4.1	4.1
55°	220.0	138.3	8.3	6.8	6.1	5.7	5.2	4.4	3.6	3.2	3.2
57.5°	218.4	125.1	7.5	6.1	5.5	5.0	4.4	3.5	2.7	2.4	2.4
60°	212.8	106.1	6.7	5.5	4.8	4.3	3.6	2.7	2.1	1.6	1.8
62.5°	197.6	82.0	5.8	4.6	4.2	3.6	2.9	2.1	1.3	1.1	1.1
65°	173.5	56.8	4.9	3.8	3.5	3.0	2.2	1.4	0.8	0.7	0.7
67.5°	140.9	36.7	3.8	3.2	3.0	2.4	1.6	0.9	0.4	0.4	0.3
70°	88.5	18.2	3.1	2.4	2.4	1.9	1.2	0.5	0.3	0.3	0.3
71°	62.6	12.4	2.7	2.2	2.2	1.8	1.1	0.4	0.3	0.3	0.3
72.5°	28.3	7.8	2.3	2.0	1.9	1.4	1.0	0.4	0.4	0.4	0.4
75°	8.9	4.3	1.6	1.5	1.5	1.2	0.9	0.5	0.5	0.5	0.5
77.5°	5.9	3.3	1.1	1.0	1.2	1.2	0.9	0.7	0.7	0.7	0.7
80°	4.8	1.8	0.7	0.7	0.9	1.1	0.9	0.7	0.8	0.7	0.7
82.5°	4.7	0.9	0.2	0.3	0.5	0.7	0.7	0.5	0.7	0.7	0.7
85°	2.0	0.2	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5
87.5°	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.4
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-HSS-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

(END OF REPORT)