

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-HSS-ULG-XXB**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400798 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-HSS-ULG-XXB
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2349.9 lumens
Efficiency: N/A
Efficacy: 79.1 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

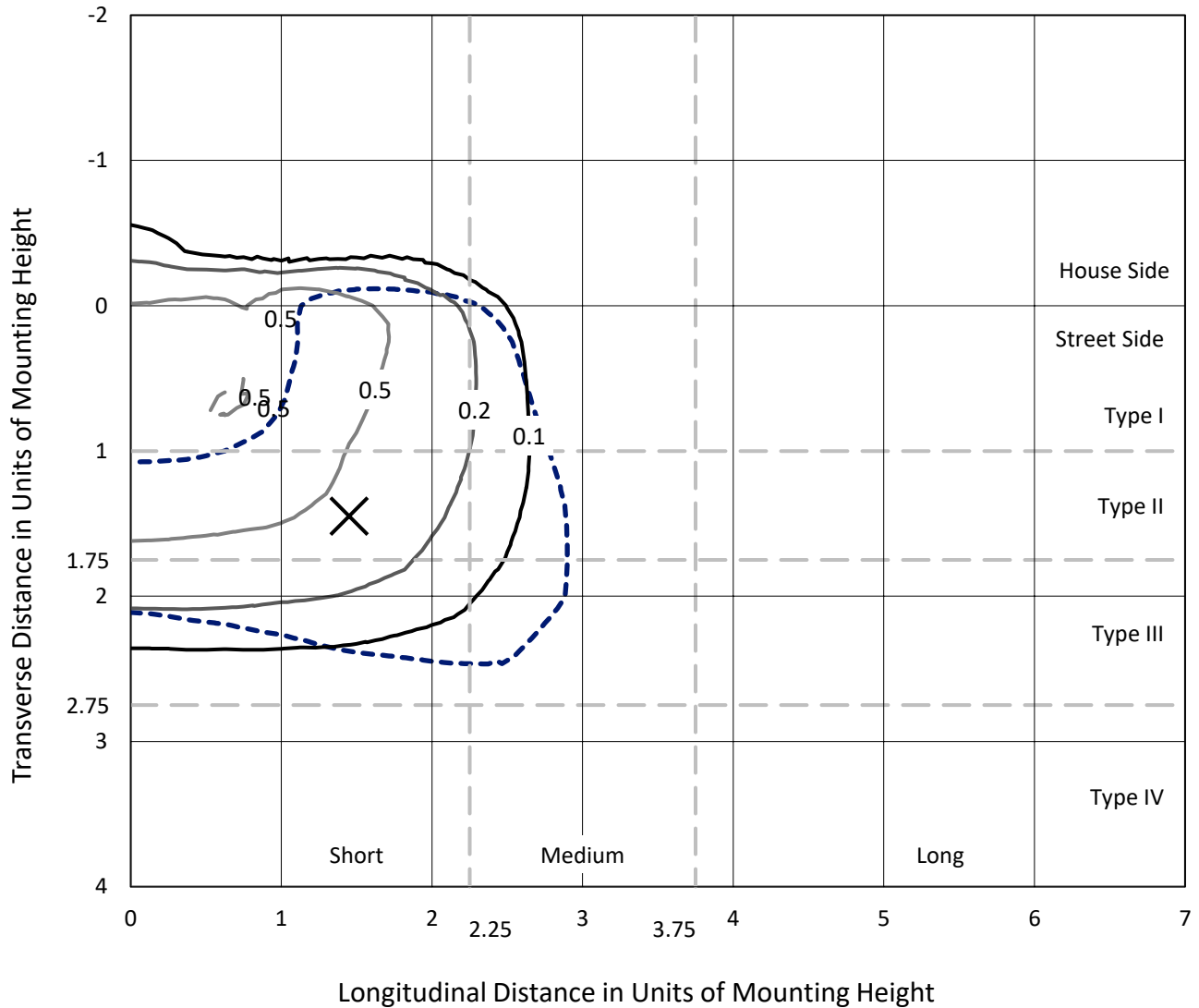
Input Watts (W): 29.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

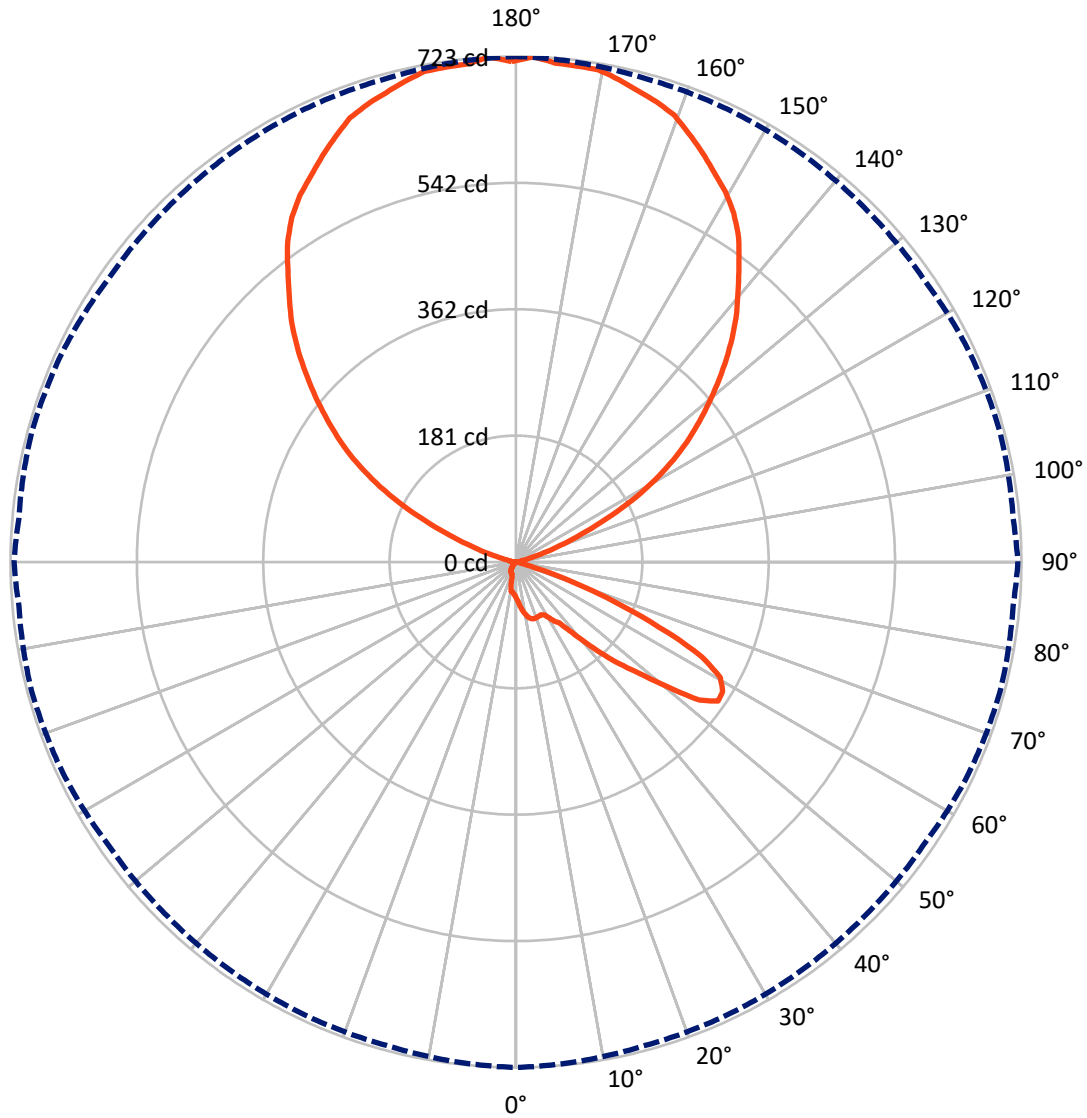
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 0.8 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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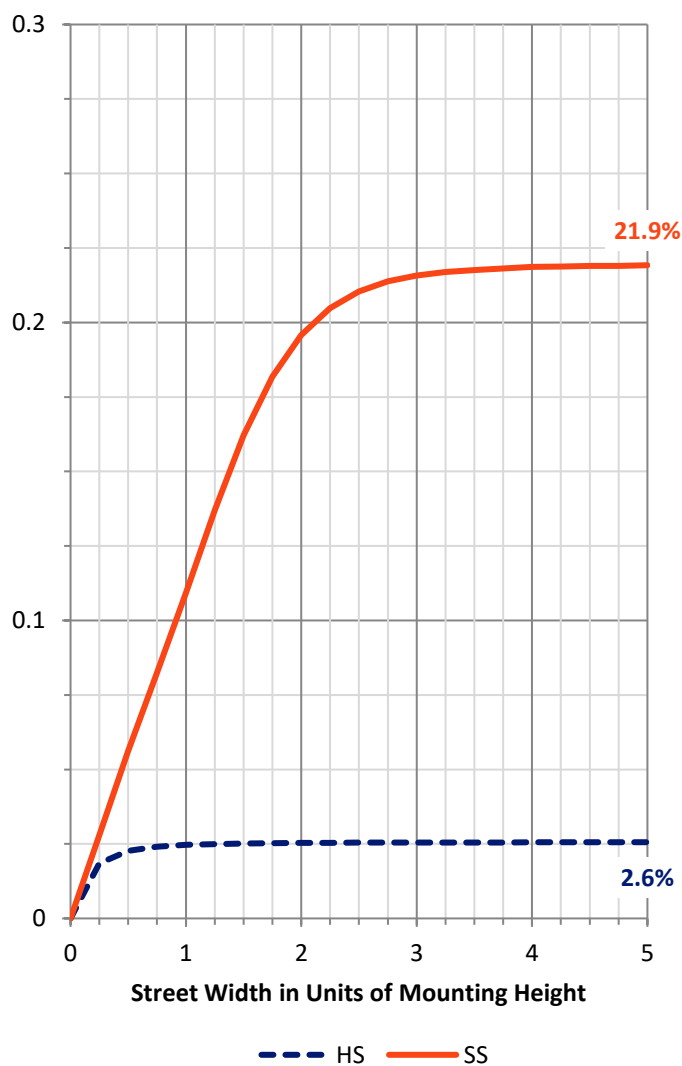
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	60.8	887.0	947.7
	% Fixture	2.6	37.7	40.3
Street Side	Lumens	515.2	887.0	1402.2
	% Fixture	21.9	37.7	59.7
Total	Lumens	576.0	1773.9	2349.9
	% Fixture	24.5	75.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.2	0.2
10°-20°	16.1	0.7
20°-30°	26.3	1.1
30°-40°	41.8	1.8
40°-50°	79.5	3.4
50°-60°	163.9	7.0
60°-70°	183.0	7.8
70°-80°	57.8	2.5
80°-90°	2.3	0.1
90°-100°	8.4	0.4
100°-110°	58.7	2.5
110°-120°	169.9	7.2
120°-130°	279.4	11.9
130°-140°	344.6	14.7
140°-150°	352.5	15.0
150°-160°	297.0	12.6
160°-170°	195.5	8.3
170°-180°	67.8	2.9
0°-90°	576.0	24.5
0°-180°	2349.9	100.0

Coefficient of Utilization



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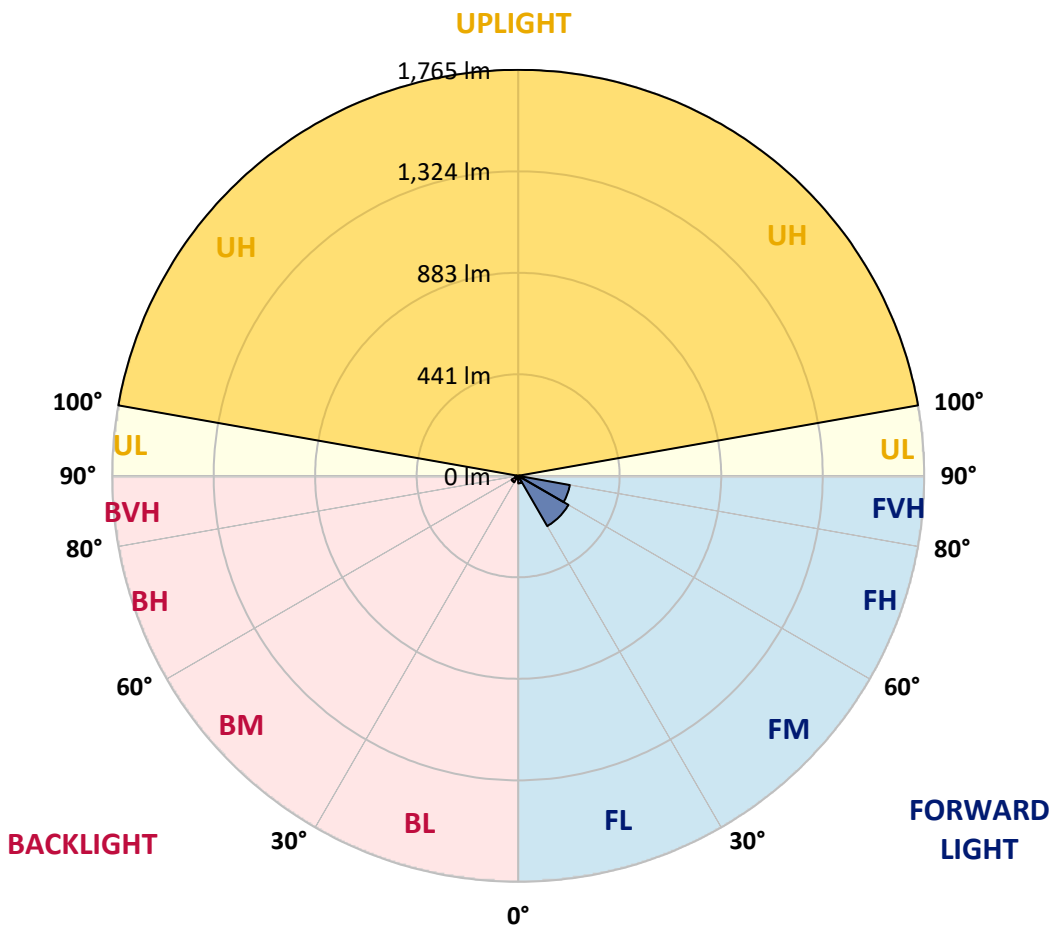
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	32.7	1.4			
FM (30°-60°)	252.4	10.7			
FH (60°-80°)	228.0	9.7			G0/660
FVH (80°-90°)	2.1	0.1			G0/10
BL (0°-30°)	14.9	0.6	B0/110		
BM (30°-60°)	32.8	1.4	B0/220		
BH (60°-80°)	12.8	0.5	B0/110		G0/110
BVH (80°-90°)	0.3	0.0			G0/10
UL (90°-100°)	8.4	0.4		U1/10	
UH (100°-180°)	1765.5	75.1		U5	

BUG Rating: B0-U5-G0

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1
2.5°	56.3	56.5	56.2	55.8	55.3	54.6	54.7	53.7	52.9	52.4	51.5
5°	63.5	63.4	62.7	61.7	60.7	59.3	59.1	57.5	55.9	54.1	52.5
7.5°	70.7	70.4	69.7	68.4	66.5	64.7	64.1	61.9	59.5	56.9	54.0
10°	76.6	76.4	75.6	74.2	72.0	69.2	69.2	66.1	62.9	59.7	56.3
12.5°	81.5	81.2	80.4	78.6	76.0	73.5	73.1	70.4	66.9	63.1	59.0
15°	84.4	84.2	83.2	81.2	78.9	76.6	76.3	73.7	70.5	66.2	61.4
17.5°	85.2	85.0	84.2	82.5	80.7	78.7	78.3	76.0	73.2	68.8	63.9
20°	84.9	84.4	84.0	82.6	81.1	79.8	79.6	78.0	75.5	71.8	66.5
22.5°	84.0	83.6	83.2	82.2	81.5	81.4	81.1	80.2	78.6	75.4	70.5
25°	83.7	83.3	83.0	82.3	82.2	83.3	83.2	83.1	82.5	79.7	74.6
27.5°	85.5	85.4	84.7	83.6	84.1	86.0	86.1	86.6	86.2	84.4	80.5
30°	92.1	91.6	89.8	87.4	88.8	91.2	91.7	93.4	93.5	93.8	88.4
32.5°	101.0	100.1	97.2	94.1	95.0	99.5	99.6	102.3	108.1	104.5	92.7
35°	107.2	106.1	101.6	99.9	104.3	111.4	112.4	118.0	118.5	105.3	92.3
37.5°	124.4	122.8	114.5	104.5	108.8	124.2	125.3	124.3	115.1	104.2	97.1
40°	147.5	145.9	138.6	121.8	109.7	112.0	112.5	115.5	117.3	111.9	112.2
42.5°	177.4	175.5	167.9	147.3	123.4	115.0	116.1	122.1	133.6	136.1	149.1
45°	208.1	207.0	199.3	177.1	148.4	135.2	135.7	143.1	163.7	179.6	190.6
47.5°	238.0	238.3	231.7	212.9	184.9	170.2	169.5	179.1	205.2	216.5	227.7
50°	280.3	280.1	268.3	256.7	234.9	217.4	216.3	221.7	246.8	251.0	268.3
52.5°	328.4	328.2	310.5	305.0	295.8	267.7	270.6	266.0	284.2	291.6	316.2
55°	351.2	349.3	341.8	348.7	359.7	331.5	331.0	313.5	327.6	334.0	356.9
57.5°	348.9	349.7	356.8	379.8	415.8	392.2	392.8	360.2	368.5	372.4	389.2
60°	335.9	336.4	353.0	391.2	443.8	439.7	437.4	403.9	398.6	396.9	404.9
62.5°	298.5	298.8	325.7	374.7	443.6	467.2	465.0	434.7	417.9	407.3	392.7
64°	257.9	262.1	295.0	350.5	431.6	472.0	470.8	442.1	419.6	400.3	370.3
65°	224.5	230.8	270.6	328.9	418.1	470.4	468.9	440.8	417.2	387.1	347.2
67.5°	153.2	156.5	192.3	258.9	366.6	447.2	446.8	423.9	391.0	334.4	272.4
70°	90.4	92.8	119.2	180.7	281.7	384.2	390.0	381.8	324.6	240.2	173.5
72.5°	28.1	29.5	52.6	100.4	184.7	299.3	306.9	301.0	236.3	150.1	96.2
75°	10.5	11.0	17.3	43.6	91.9	191.4	193.7	200.6	143.9	79.3	42.1
77.5°	5.8	5.9	8.6	16.4	40.4	94.0	96.2	95.3	76.5	37.4	13.4
80°	2.9	3.0	4.2	7.2	15.7	26.6	31.5	41.6	27.0	18.4	4.3
82.5°	1.0	0.9	1.9	3.3	5.3	7.1	8.0	11.5	11.3	10.1	1.5
85°	0.0	0.0	0.1	0.1	0.1	0.2	0.2	1.4	2.9	3.3	0.4
87.5°	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
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



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CATALOG NUMBER: ENT-SA1-740-U-T4W-HSS-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°	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1	51.1
2.5°	51.1	50.8	50.1	49.3	48.7	48.1	48.0	47.5	47.4	47.4	47.4
5°	51.6	50.9	49.5	48.3	47.2	46.2	45.8	45.3	45.0	44.9	44.9
7.5°	52.8	51.8	49.5	47.8	46.1	44.9	44.2	43.8	43.5	43.5	43.5
10°	54.6	53.0	50.2	47.8	45.8	44.2	43.3	42.6	42.2	42.1	42.2
12.5°	56.8	54.8	51.3	48.3	46.0	44.0	41.9	38.1	35.6	34.1	33.9
15°	58.9	56.5	52.5	49.1	46.3	41.9	34.4	28.4	24.5	23.3	23.1
17.5°	61.2	58.7	54.1	50.2	45.1	33.8	24.5	19.5	18.8	19.0	19.0
20°	64.0	61.2	55.9	51.3	38.9	24.0	17.9	17.2	17.5	17.9	17.9
22.5°	67.3	64.2	58.3	50.6	29.6	17.6	16.4	16.5	16.7	17.1	17.1
25°	71.6	68.4	60.9	45.7	20.6	15.4	15.5	15.6	15.9	16.4	16.5
27.5°	78.0	74.1	64.1	38.3	15.6	14.3	14.4	14.7	15.0	15.6	15.6
30°	84.8	80.0	67.0	29.5	13.6	13.1	13.2	13.5	14.1	14.5	14.7
32.5°	87.7	83.6	67.5	20.2	12.6	12.1	11.9	12.2	12.6	13.1	13.2
35°	89.4	87.6	64.9	14.6	11.9	11.2	10.8	10.7	10.8	11.1	11.1
37.5°	97.5	96.3	59.6	12.5	11.1	10.4	9.8	9.2	9.0	8.9	9.0
40°	113.1	110.5	52.7	11.5	10.4	9.7	8.8	7.9	7.1	6.8	6.8
42.5°	147.5	134.2	42.8	10.9	9.8	8.9	7.6	6.4	5.5	5.3	5.3
45°	184.5	163.6	32.2	10.3	9.1	8.0	6.4	5.1	4.3	4.1	4.1
47.5°	220.0	185.3	22.5	9.7	8.3	7.0	5.3	4.1	3.5	3.4	3.4
50°	257.4	204.2	15.7	8.9	7.6	6.0	4.3	3.3	3.0	3.0	3.0
52.5°	293.7	218.2	11.5	8.1	6.6	5.1	3.6	3.0	2.7	2.7	2.7
55°	321.2	223.5	8.8	7.1	5.6	4.3	3.3	2.9	2.6	2.5	2.5
57.5°	339.5	219.0	7.1	5.9	4.7	3.7	3.0	2.6	2.4	2.3	2.3
60°	339.0	204.1	5.7	4.8	3.8	3.2	2.7	2.4	2.2	2.1	2.1
62.5°	319.2	179.8	4.5	3.8	3.2	2.7	2.4	2.2	2.0	1.9	1.8
64°	299.7	164.8	3.8	3.3	2.9	2.5	2.2	2.0	1.8	1.5	1.5
65°	278.7	150.5	3.5	3.0	2.5	2.3	2.1	1.9	1.5	1.3	1.3
67.5°	211.9	111.4	2.9	2.3	2.0	1.9	1.6	1.4	1.1	0.9	0.9
70°	137.6	72.1	2.4	1.9	1.6	1.6	1.5	1.2	0.9	0.8	0.7
72.5°	70.5	35.9	2.0	1.5	1.4	1.4	1.3	1.0	0.8	0.7	0.5
75°	29.9	14.6	1.6	1.3	1.2	1.1	1.0	0.9	0.7	0.5	0.5
77.5°	10.4	5.5	1.5	1.3	1.0	0.9	0.9	0.9	0.9	0.8	0.7
80°	3.5	2.1	1.0	1.0	1.1	1.2	1.2	1.1	1.2	1.0	0.8
82.5°	1.4	0.8	0.3	0.4	0.8	0.9	1.0	1.0	1.0	0.8	0.7
85°	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.4
87.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	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°	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-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)