

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-T4FT-HSS-ULG-XXB**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400794 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-T4FT-HSS-ULG-XXB
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2320.9 lumens
Efficiency: N/A
Efficacy: 78.1 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

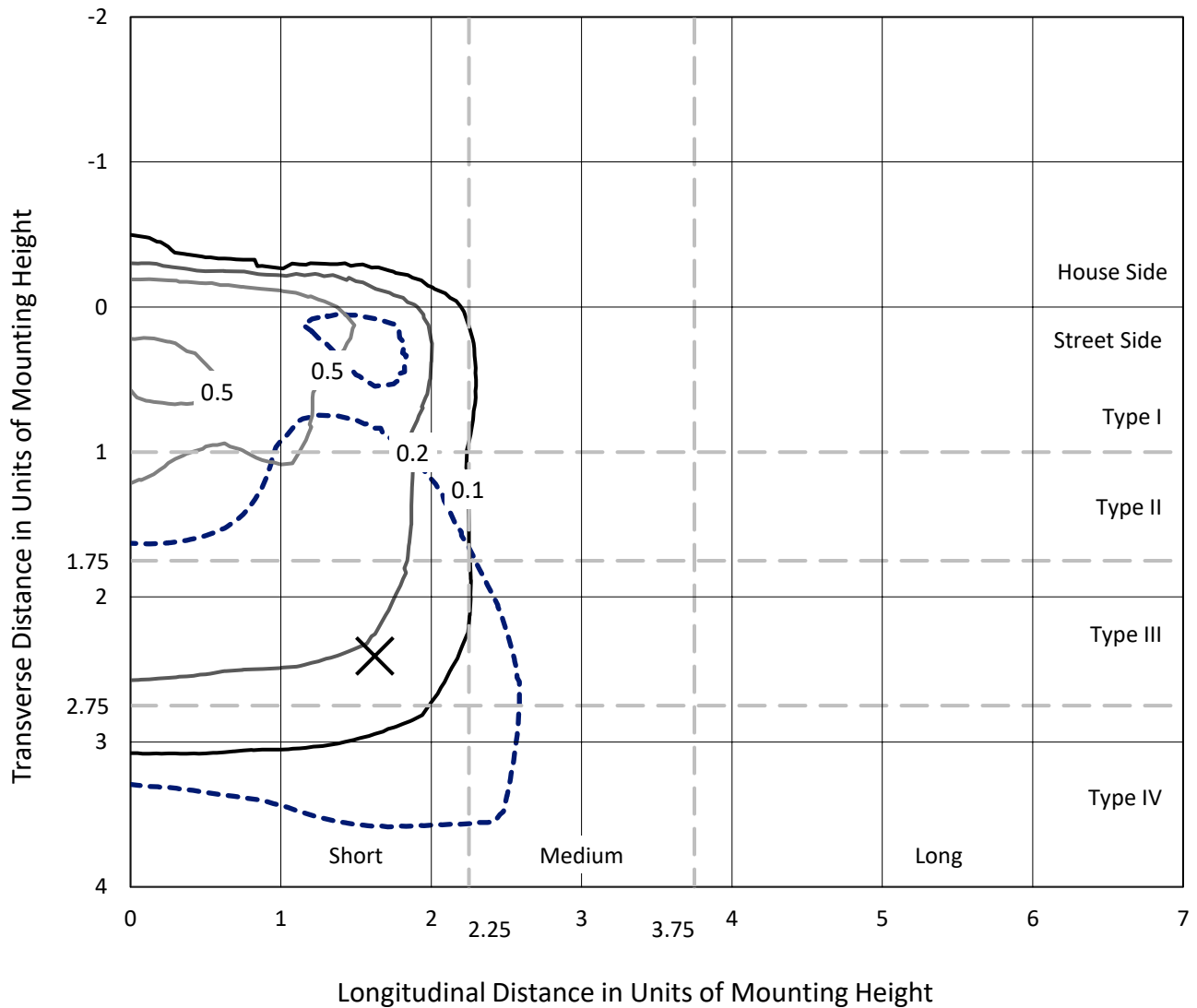
Input Watts (W): 29.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

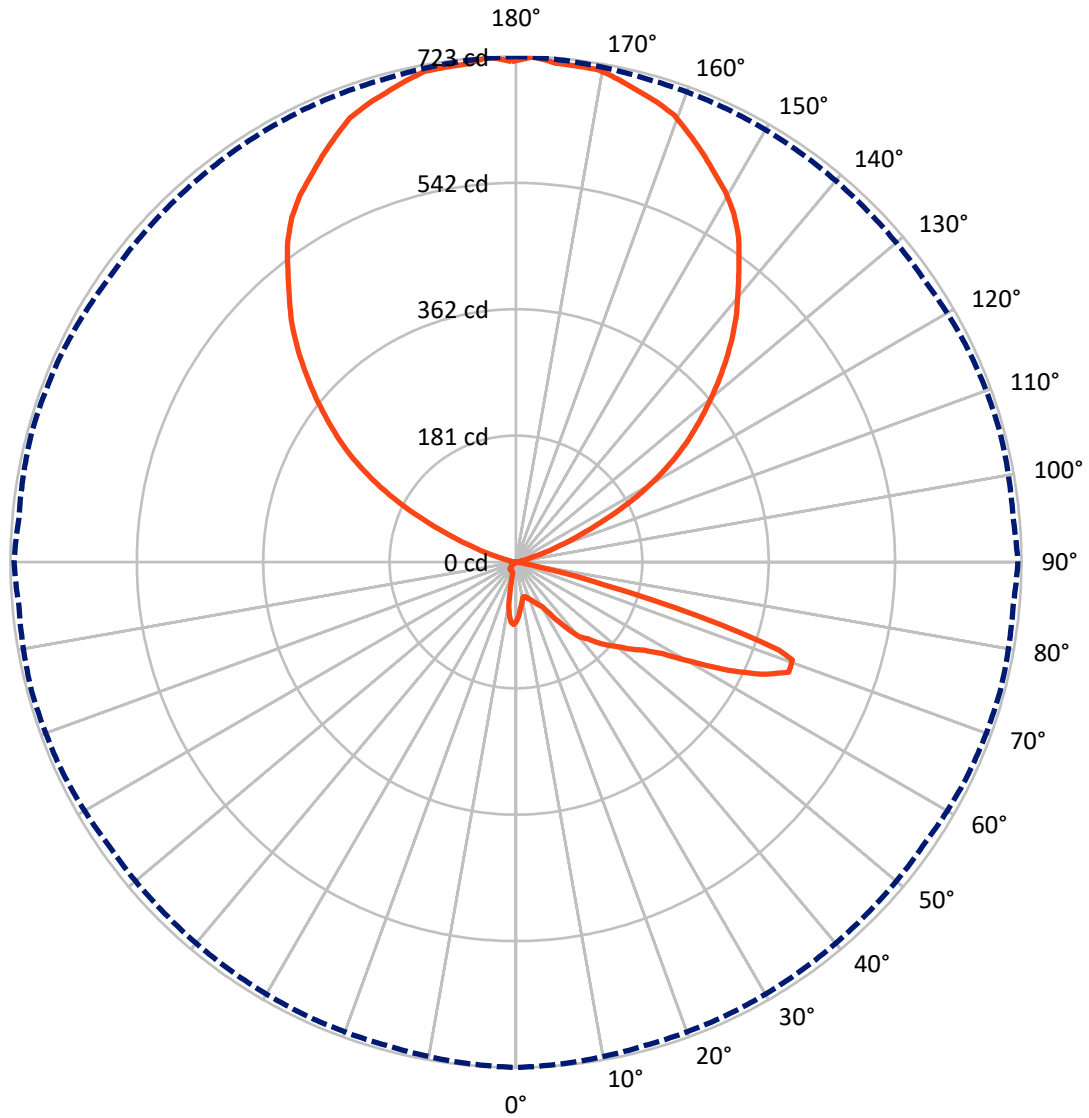
✕ Max cd
 - - - 1/2 Max cd



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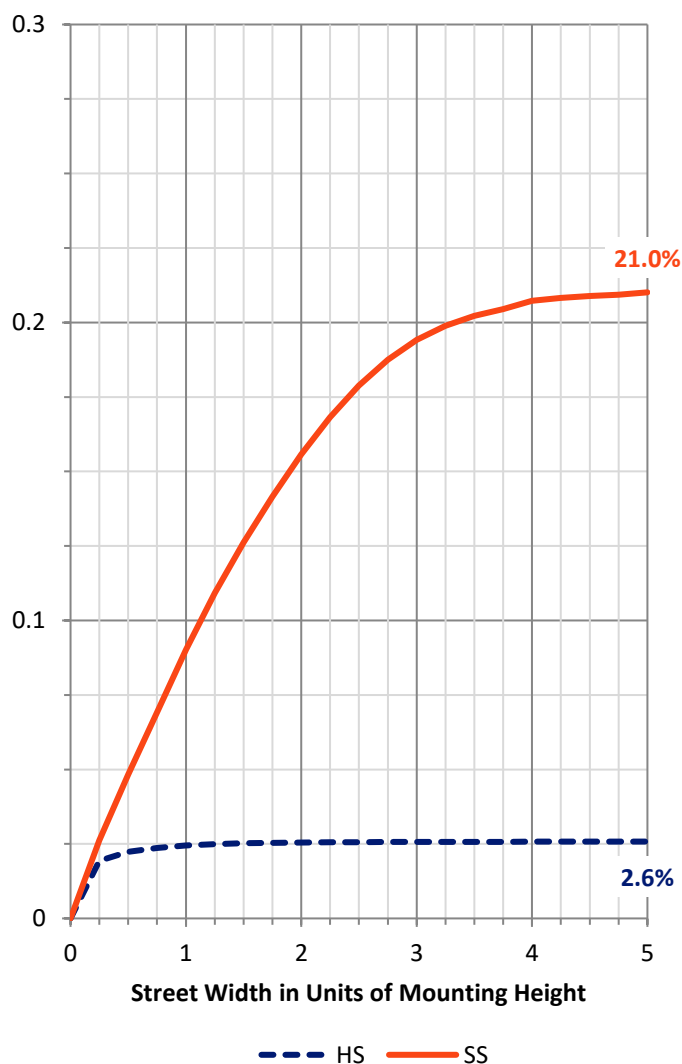
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	60.5	887.0	947.4
	% Fixture	2.6	38.2	40.8
Street Side	Lumens	486.5	887.0	1373.5
	% Fixture	21.0	38.2	59.2
Total	Lumens	547.0	1773.9	2320.9
	% Fixture	23.6	76.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	7.5	0.3
10°-20°	17.1	0.7
20°-30°	25.6	1.1
30°-40°	42.7	1.8
40°-50°	77.1	3.3
50°-60°	122.3	5.3
60°-70°	164.4	7.1
70°-80°	87.2	3.8
80°-90°	3.2	0.1
90°-100°	8.4	0.4
100°-110°	58.7	2.5
110°-120°	169.9	7.3
120°-130°	279.4	12.0
130°-140°	344.6	14.8
140°-150°	352.5	15.2
150°-160°	297.0	12.8
160°-170°	195.5	8.4
170°-180°	67.8	2.9
0°-90°	547.0	23.6
0°-180°	2320.9	100.0

Coefficient of Utilization



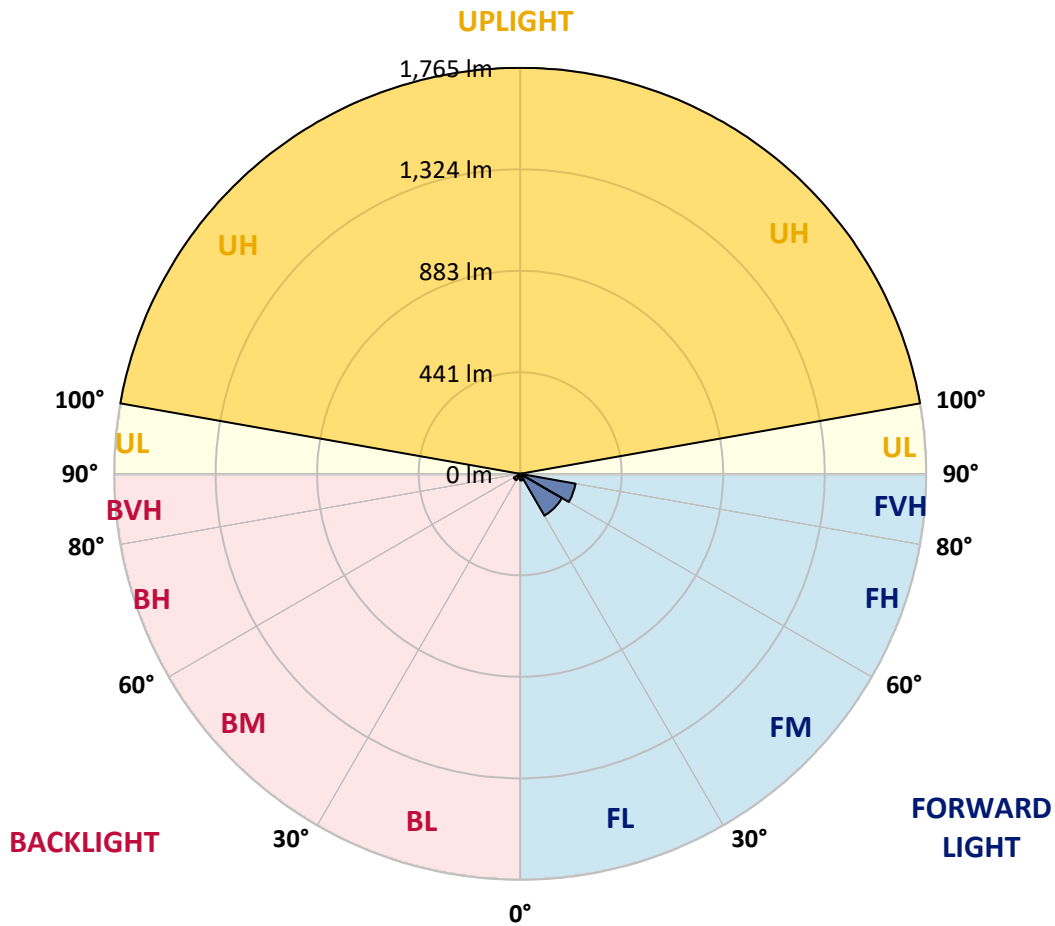
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	29.1	1.3			
FM (30°-60°)	210.0	9.0			
FH (60°-80°)	244.5	10.5			G0/660
FVH (80°-90°)	2.9	0.1			G0/10
BL (0°-30°)	21.0	0.9	B0/110		
BM (30°-60°)	32.1	1.4	B0/220		
BH (60°-80°)	7.1	0.3	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	76.1		U5	

BUG Rating: B0-U5-G0

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8
2.5°	77.2	76.2	77.1	77.5	77.8	78.3	78.9	80.1	81.5	83.0	83.9
5°	67.3	67.8	68.2	69.4	70.6	70.8	72.9	75.3	78.4	81.5	84.1
7.5°	59.3	59.3	60.3	62.1	64.1	64.3	68.0	71.1	75.5	80.3	84.5
10°	52.9	53.1	53.9	55.8	58.3	58.8	62.9	67.3	72.8	78.9	85.0
12.5°	50.8	50.7	50.6	51.9	54.0	54.6	59.1	64.3	70.8	78.3	86.1
15°	52.1	51.8	51.1	51.3	52.6	53.1	57.1	62.4	69.6	78.2	87.9
17.5°	54.2	53.8	52.4	51.9	53.4	53.9	57.2	61.8	69.2	78.7	90.1
20°	56.8	56.3	54.1	53.6	55.0	55.4	58.8	62.8	69.4	79.8	93.1
22.5°	60.4	59.8	56.6	56.0	57.4	57.9	61.5	65.1	70.7	81.8	97.2
25°	64.8	64.1	60.1	59.2	60.9	61.4	65.0	68.4	72.9	84.4	102.3
27.5°	69.6	68.8	64.6	62.8	64.8	65.4	68.8	72.6	76.1	87.7	109.1
30°	74.0	73.1	68.9	67.0	68.9	69.3	73.3	77.5	81.2	93.3	119.1
32.5°	86.2	84.0	77.5	71.8	73.1	73.8	78.7	85.3	90.9	100.0	132.0
35°	104.4	102.6	94.7	84.9	80.3	80.5	86.8	95.2	97.7	107.8	147.9
37.5°	122.0	120.4	113.5	104.4	95.6	96.0	97.1	105.1	108.0	121.3	167.3
40°	141.2	138.8	133.3	124.6	118.6	117.1	111.8	117.4	123.8	138.3	188.5
42.5°	150.1	147.8	142.1	142.6	142.0	139.4	128.8	136.6	143.8	163.0	211.9
45°	164.8	160.3	148.5	149.4	148.5	148.8	151.4	162.7	169.0	189.2	238.3
47.5°	178.4	173.2	160.9	160.1	163.9	165.9	180.0	193.8	194.3	211.9	259.1
50°	190.8	187.1	175.8	175.9	182.9	185.1	213.4	225.9	214.9	229.3	275.3
52.5°	207.3	202.0	191.9	195.5	206.5	208.5	246.7	254.2	229.7	245.2	288.1
55°	222.5	219.7	212.2	217.6	234.4	239.6	280.5	275.9	240.1	259.2	294.2
57.5°	247.6	244.8	242.8	245.6	268.1	274.6	314.8	291.3	248.2	268.5	291.4
60°	289.3	286.5	280.6	283.1	312.5	315.7	341.7	306.9	251.4	271.2	280.2
62.5°	340.8	337.4	327.8	339.5	368.9	368.8	369.5	315.1	247.3	263.4	250.6
65°	387.2	382.5	377.6	401.3	437.1	432.1	399.2	316.1	234.5	225.7	193.9
67.5°	421.0	419.2	421.9	458.9	497.4	492.5	427.9	302.5	195.2	162.9	119.8
70°	419.7	415.9	433.3	492.4	527.4	523.3	426.7	248.6	130.2	86.3	50.2
71°	397.0	392.6	419.2	489.1	529.2	525.3	411.4	212.7	103.0	60.9	33.0
72.5°	306.7	320.0	362.3	453.9	512.3	507.3	369.5	162.8	65.2	35.2	16.6
75°	129.8	137.0	215.1	324.0	384.3	381.7	249.1	75.2	30.0	15.9	6.4
77.5°	33.4	32.9	65.9	139.0	223.7	227.7	114.8	25.8	15.6	11.3	3.6
80°	6.5	7.0	18.8	48.3	85.4	87.7	37.4	11.3	10.4	8.9	1.9
82.5°	0.7	0.8	3.3	14.9	28.7	27.7	8.2	4.3	6.4	6.0	0.9
85°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.4	1.5	1.6	0.2
87.5°	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	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	9.1	9.2	9.2	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.1	12.3	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	26.7	27.6	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	47.9	49.1	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	73.2	74.7	90.0	97.2	96.2	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	102.8	104.3	116.6	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	135.8	137.1	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.0	171.9	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.1	206.6	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.0	242.4	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	276.8	277.2	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	311.4	312.0	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.2	346.8	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.1	378.5	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.0	413.3	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	444.7	445.0	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.2	474.6	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.1	502.3	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	532.7	533.0	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.3	562.6	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.2	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	623.9	624.0	624.0	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.2	644.5	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.6	660.8	659.8	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.1	670.0	670.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.6	676.2	678.2	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.7	688.4	688.4	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.6	703.8	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.8	708.9	706.9	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	706.1	705.8	705.8	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	707.3	706.9	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.2	713.0	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°	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8
2.5°	84.5	85.5	86.6	87.4	88.2	88.3	89.4	89.1	89.5	89.6	89.5
5°	85.5	86.8	88.9	90.0	90.5	89.7	89.5	88.3	87.8	87.3	86.7
7.5°	86.6	88.3	90.7	91.2	89.7	86.8	84.5	81.6	78.8	77.1	77.3
10°	87.8	89.9	91.9	90.5	86.5	80.9	74.4	67.8	62.0	59.8	60.6
12.5°	89.4	91.9	92.8	88.8	81.1	69.8	58.1	48.1	42.0	38.4	38.0
15°	91.7	94.2	93.2	86.2	72.6	54.9	40.3	30.2	24.4	22.5	21.5
17.5°	94.5	96.9	93.2	81.5	60.4	39.3	24.5	18.3	16.5	16.0	16.1
20°	98.0	100.3	92.8	74.3	46.5	24.2	16.4	15.2	15.2	15.2	15.0
22.5°	102.8	104.0	92.1	64.9	32.1	16.4	14.5	14.4	14.5	14.5	14.5
25°	108.5	108.2	90.9	53.6	20.2	13.9	13.8	13.8	13.9	14.1	14.1
27.5°	116.0	113.7	88.8	40.1	14.3	13.0	13.2	13.4	13.6	13.8	13.8
30°	126.6	121.0	85.4	27.1	12.1	12.0	12.4	13.1	13.4	13.6	13.6
32.5°	137.9	128.4	79.6	17.3	11.1	11.0	11.4	12.4	13.3	13.5	13.5
35°	152.2	136.5	70.9	12.5	10.4	10.2	10.6	11.5	12.8	13.5	13.5
37.5°	167.2	145.0	58.3	10.5	9.8	9.6	9.9	10.5	12.1	13.3	13.4
40°	183.2	152.6	43.8	9.8	9.1	9.0	9.1	9.8	11.0	12.6	13.0
42.5°	199.4	159.0	30.6	9.0	8.6	8.3	8.6	9.0	10.1	11.5	11.7
45°	217.2	166.0	20.4	8.3	8.1	7.9	8.1	8.5	9.2	10.0	10.1
47.5°	230.1	168.5	14.1	7.6	7.5	7.6	7.7	7.9	8.3	8.5	8.3
50°	238.7	167.2	10.1	6.8	6.9	7.2	7.2	7.4	7.4	7.0	6.9
52.5°	244.9	162.4	7.8	5.8	6.5	6.8	6.8	6.6	6.4	5.9	5.8
55°	245.6	151.5	6.1	5.1	5.8	6.4	6.3	5.8	5.4	4.9	4.9
57.5°	237.2	135.0	5.1	4.3	5.1	5.6	5.4	4.9	4.4	4.1	4.1
60°	223.7	118.1	4.3	3.6	4.2	4.7	4.4	4.1	3.5	3.2	3.2
62.5°	198.8	101.4	3.5	3.0	3.4	3.7	3.6	3.3	2.7	2.5	2.4
65°	152.4	77.2	2.6	2.3	2.6	3.1	2.9	2.5	2.2	1.9	1.8
67.5°	91.6	46.4	2.1	1.8	2.1	2.4	2.2	1.9	1.5	1.3	1.3
70°	38.8	19.9	1.6	1.3	1.5	1.9	1.8	1.5	1.2	1.1	1.1
71°	26.3	14.2	1.4	1.2	1.4	1.8	1.6	1.4	1.2	1.1	1.1
72.5°	13.5	7.2	1.2	1.0	1.3	1.5	1.5	1.3	1.1	1.1	1.1
75°	4.8	3.1	1.0	0.9	1.1	1.1	1.2	1.2	1.2	1.2	1.1
77.5°	2.7	1.9	0.9	0.9	0.9	1.0	1.2	1.3	1.4	1.4	1.3
80°	1.5	1.0	0.5	0.7	0.9	1.0	1.2	1.3	1.5	1.5	1.4
82.5°	0.8	0.3	0.1	0.3	0.5	0.9	1.0	1.1	1.3	1.2	1.2
85°	0.1	0.0	0.0	0.1	0.3	0.4	0.7	0.9	1.1	1.1	1.0
87.5°	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.8	0.9	0.8
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-T4FT-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)