

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-SA1A-740-U-T4FT-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400974 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-740-U-T4FT-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE 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: 3709.9 lumens
Efficiency: N/A
Efficacy: 100.8 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

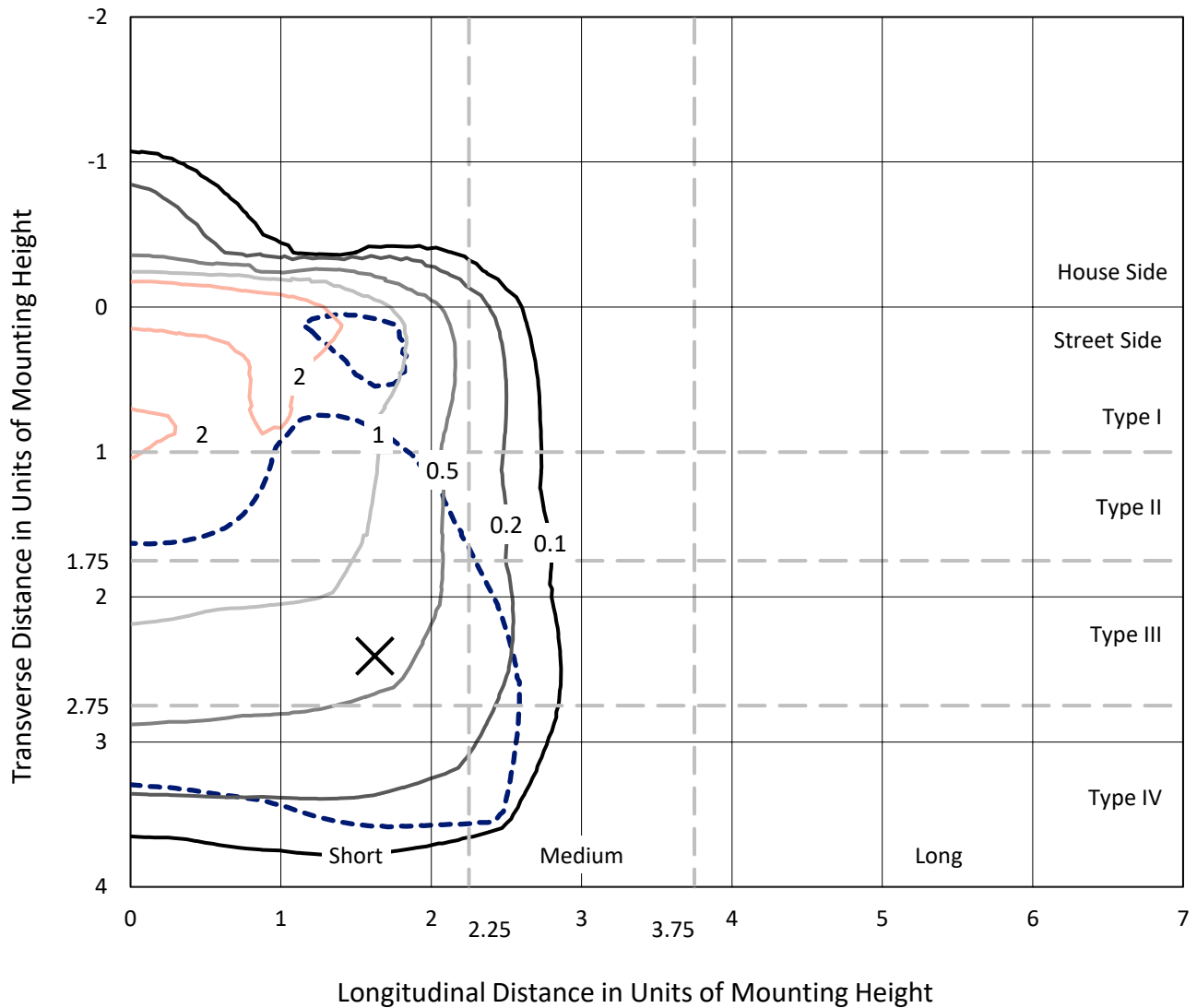
Input Watts (W): 36.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

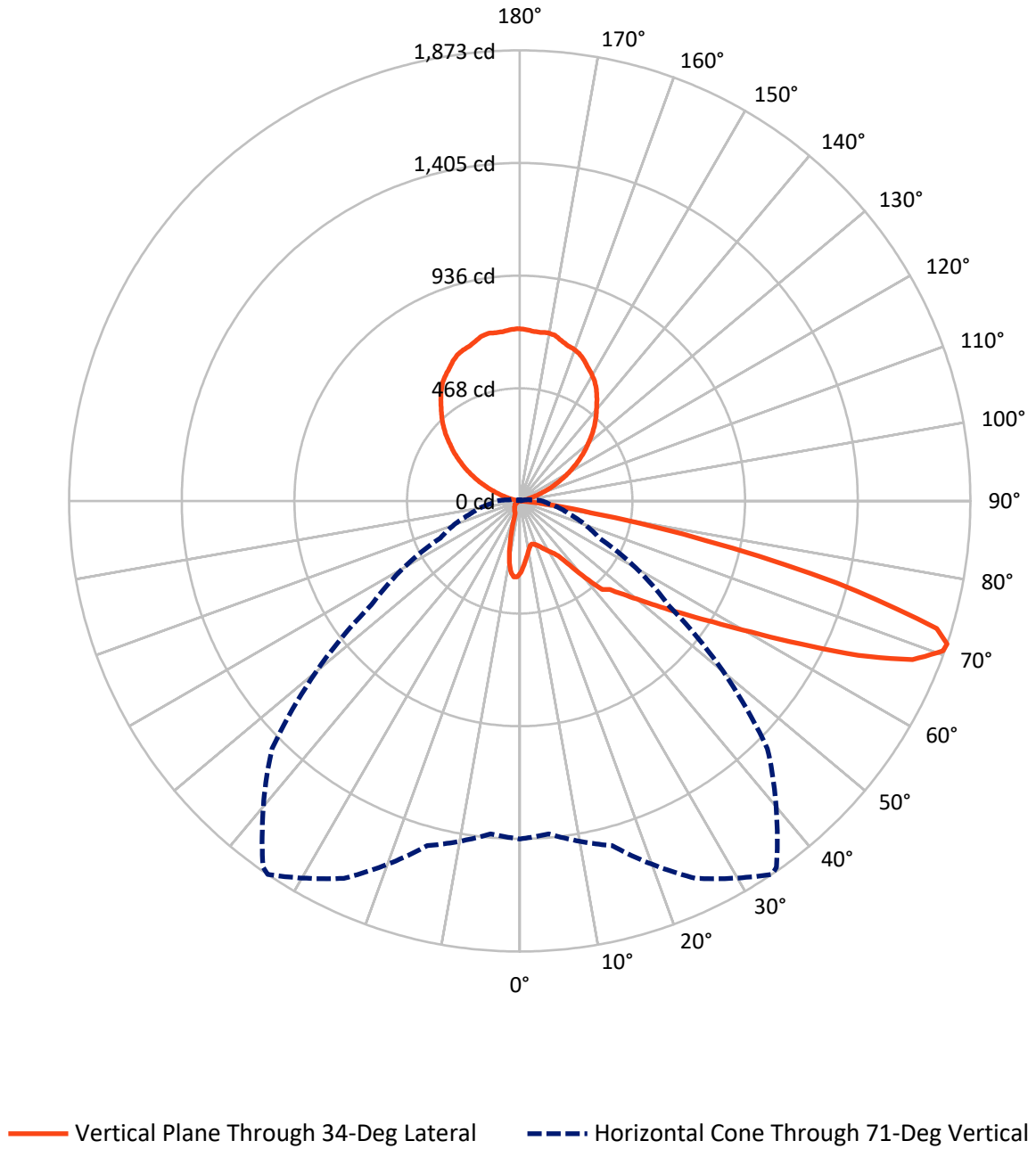
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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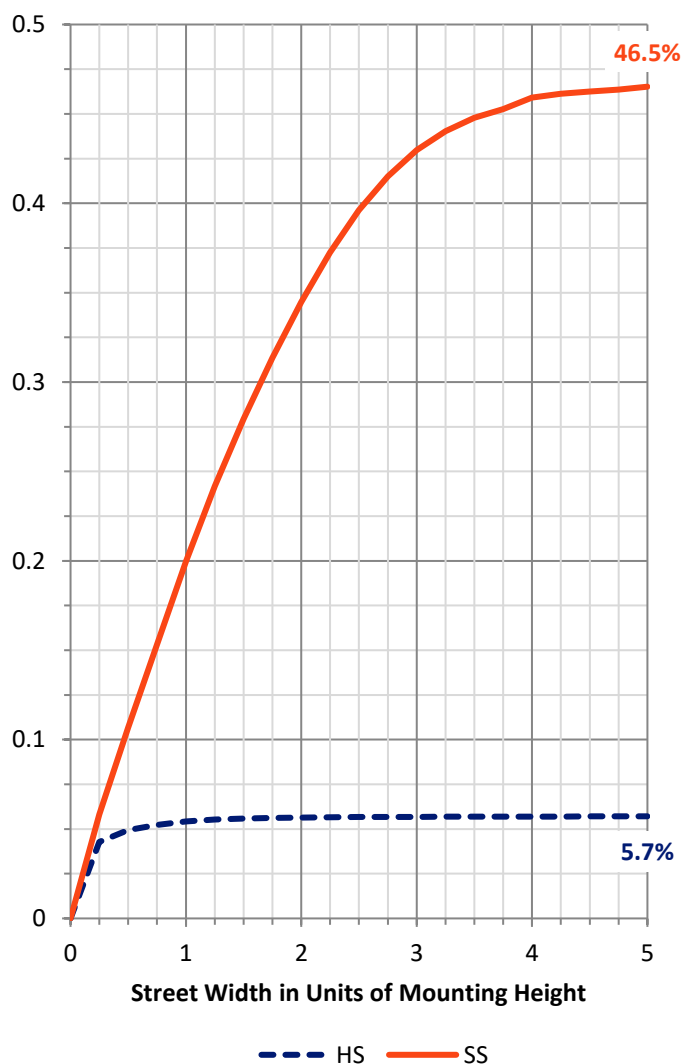
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	214.1	887.0	1101.0
	% Fixture	5.8	23.9	29.7
Street Side	Lumens	1721.9	887.0	2608.9
	% Fixture	46.4	23.9	70.3
Total	Lumens	1936.0	1773.9	3709.9
	% Fixture	52.2	47.8	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.4	0.7
10°-20°	60.6	1.6
20°-30°	90.4	2.4
30°-40°	151.1	4.1
40°-50°	272.8	7.4
50°-60°	432.9	11.7
60°-70°	581.7	15.7
70°-80°	308.7	8.3
80°-90°	11.4	0.3
90°-100°	8.4	0.2
100°-110°	58.7	1.6
110°-120°	169.9	4.6
120°-130°	279.4	7.5
130°-140°	344.6	9.3
140°-150°	352.5	9.5
150°-160°	297.0	8.0
160°-170°	195.5	5.3
170°-180°	67.8	1.8
0°-90°	1936.0	52.2
0°-180°	3709.9	100.0

Coefficient of Utilization

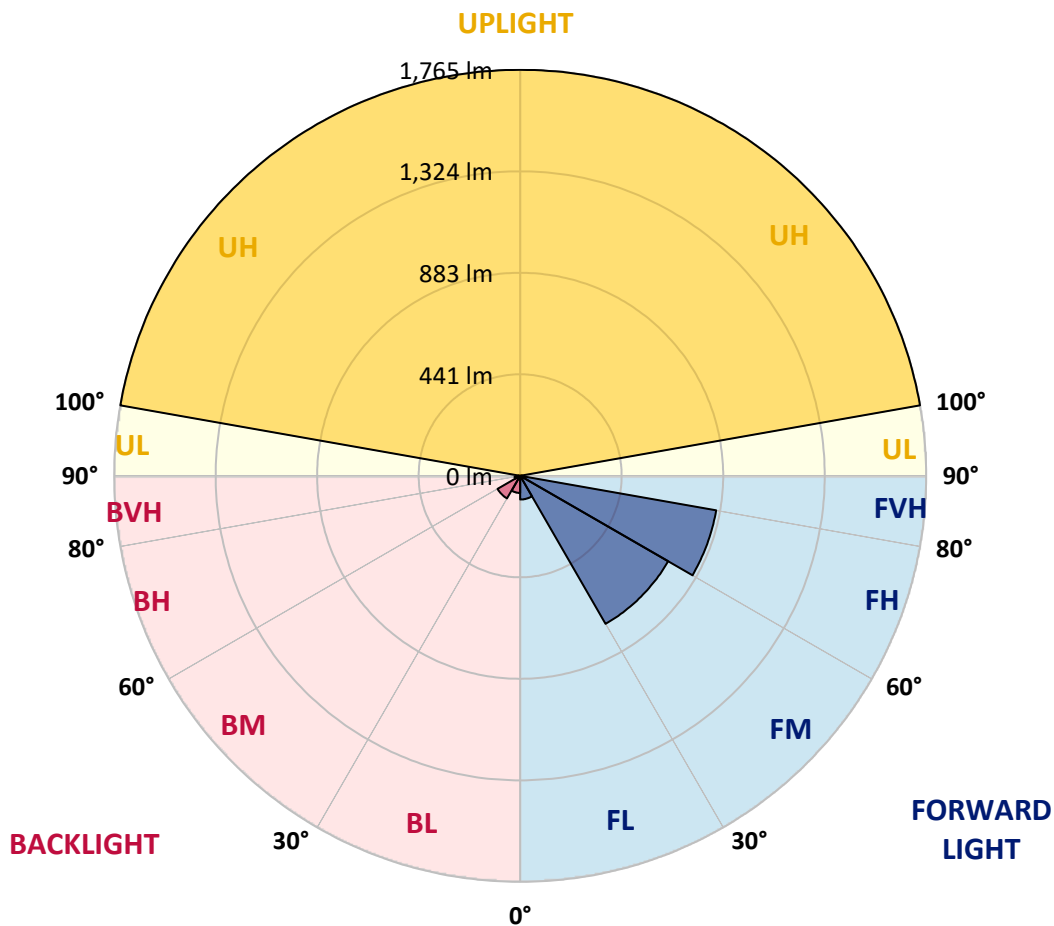


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	103.0	2.8			
FM (30°-60°)	743.2	20.0			
FH (60°-80°)	865.4	23.3			G1/1800
FVH (80°-90°)	10.4	0.3			G1/100
BL (0°-30°)	74.5	2.0	B0/110		
BM (30°-60°)	113.6	3.1	B0/220		
BH (60°-80°)	25.0	0.7	B0/110		G0/110
BVH (80°-90°)	1.0	0.0			G0/10
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	47.6		U5	

BUG Rating: B0-U5-G1
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
2.5°	273.2	269.7	272.8	274.3	275.5	277.0	279.4	283.7	288.3	293.8	296.9
5°	238.2	240.1	241.3	245.6	249.8	250.6	258.0	266.6	277.4	288.3	297.6
7.5°	209.8	209.8	213.3	219.9	226.9	227.7	240.5	251.8	267.3	284.0	299.2
10°	187.3	188.1	190.8	197.4	206.3	208.3	222.6	238.2	257.6	279.4	300.7
12.5°	179.9	179.5	179.1	183.8	191.2	193.1	209.0	227.7	250.6	277.0	304.6
15°	184.6	183.4	180.7	181.5	186.1	188.1	202.1	220.7	246.4	276.7	311.2
17.5°	192.0	190.4	185.3	183.8	188.8	190.8	202.4	218.8	244.8	278.6	319.0
20°	200.9	199.3	191.6	189.6	194.7	196.2	208.3	222.3	245.6	282.5	329.5
22.5°	213.7	211.8	200.5	198.2	203.2	204.8	217.6	230.4	250.2	289.5	343.9
25°	229.3	226.9	212.5	209.4	215.7	217.2	230.0	242.1	258.0	298.8	362.1
27.5°	246.4	243.6	228.5	222.3	229.3	231.6	243.6	256.8	269.3	310.5	386.2
30°	261.9	258.8	244.0	237.0	244.0	245.2	259.6	274.3	287.5	330.3	421.6
32.5°	305.0	297.3	274.3	254.1	258.8	261.1	278.6	301.9	321.7	354.0	467.1
35°	369.5	363.3	335.3	300.4	284.0	284.8	307.4	336.9	345.8	381.6	523.4
37.5°	431.7	426.3	401.8	369.5	338.4	339.6	343.5	371.9	382.3	429.4	592.2
40°	499.7	491.1	471.7	441.0	419.7	414.6	395.6	415.4	438.3	489.6	667.2
42.5°	531.2	523.0	502.8	504.7	502.4	493.5	455.8	483.4	509.0	577.0	749.9
45°	583.2	567.3	525.7	528.8	525.7	526.5	535.8	575.9	598.0	669.5	843.6
47.5°	631.4	613.2	569.6	566.5	580.1	587.1	637.2	685.8	687.8	749.9	917.0
50°	675.3	662.1	622.1	622.5	647.4	655.1	755.4	799.7	760.4	811.7	974.5
52.5°	733.6	715.0	679.2	692.0	730.9	737.9	873.1	899.5	812.9	867.7	1019.6
55°	787.6	777.5	751.1	770.1	829.6	847.9	992.8	976.5	849.8	917.4	1041.4
57.5°	876.2	866.5	859.5	869.2	948.9	971.8	1114.0	1030.9	878.5	950.4	1031.3
60°	1023.9	1014.2	993.2	1002.1	1105.9	1117.5	1209.2	1086.0	889.8	959.8	991.6
62.5°	1206.1	1194.1	1160.3	1201.4	1305.6	1305.2	1307.9	1115.2	875.4	932.2	887.1
65°	1370.5	1353.8	1336.3	1420.2	1546.9	1529.4	1412.8	1118.7	830.0	798.9	686.2
67.5°	1490.2	1483.5	1493.3	1624.2	1760.6	1743.1	1514.6	1070.5	690.9	576.6	423.9
70°	1485.5	1471.9	1533.7	1742.7	1866.7	1852.3	1510.4	879.7	460.8	305.4	177.6
71°	1405.1	1389.5	1483.5	1731.1	1872.9	1859.3	1456.0	752.7	364.5	215.7	117.0
72.5°	1085.7	1132.7	1282.3	1606.3	1813.0	1795.6	1307.9	576.2	230.8	124.7	58.7
75°	459.3	484.9	761.2	1146.7	1360.0	1351.0	881.7	266.2	106.1	56.3	22.5
77.5°	118.1	116.6	233.1	491.9	791.9	805.9	406.4	91.3	55.2	40.0	12.8
80°	22.9	24.9	66.4	171.0	302.3	310.5	132.5	40.0	36.9	31.5	6.6
82.5°	2.3	2.7	11.7	52.8	101.4	97.9	29.1	15.2	22.5	21.4	3.1
85°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	1.6	5.4	5.8	0.8
87.5°	0.0	0.0	0.4	0.4	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°	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
2.5°	299.2	302.7	306.6	309.3	312.0	312.4	316.3	315.5	316.7	317.1	316.7
5°	302.7	307.4	314.7	318.6	320.2	317.5	316.7	312.4	310.9	308.9	307.0
7.5°	306.6	312.4	321.0	322.9	317.5	307.4	299.2	288.7	279.0	272.8	273.6
10°	310.9	318.2	325.2	320.2	306.2	286.4	263.4	240.1	219.5	211.8	214.5
12.5°	316.3	325.2	328.3	314.3	287.2	247.1	205.6	170.2	148.8	136.0	134.4
15°	324.5	333.4	329.9	305.0	256.8	194.3	142.6	106.9	86.3	79.7	76.2
17.5°	334.6	343.1	329.9	288.3	213.7	139.1	86.7	64.9	58.3	56.7	57.1
20°	347.0	355.1	328.3	263.1	164.8	85.5	57.9	53.6	53.6	53.6	53.2
22.5°	363.7	368.0	326.0	229.6	113.5	57.9	51.3	50.9	51.3	51.3	51.3
25°	383.9	383.1	321.7	189.6	71.5	49.3	49.0	49.0	49.3	49.7	49.7
27.5°	410.7	402.6	314.3	141.8	50.5	45.9	46.6	47.4	48.2	49.0	49.0
30°	448.0	428.2	302.3	96.0	42.7	42.4	43.9	46.2	47.4	48.2	48.2
32.5°	488.0	454.6	281.7	61.4	39.2	38.9	40.4	43.9	47.0	47.8	47.8
35°	538.6	483.0	251.0	44.3	36.9	36.1	37.7	40.8	45.5	47.8	47.8
37.5°	591.8	513.3	206.3	37.3	34.6	33.8	35.0	37.3	42.7	47.0	47.4
40°	648.5	540.1	155.0	34.6	32.3	31.9	32.3	34.6	38.9	44.7	45.9
42.5°	705.6	562.6	108.4	31.9	30.3	29.5	30.3	31.9	35.7	40.8	41.6
45°	768.6	587.5	72.3	29.5	28.8	28.0	28.8	29.9	32.6	35.4	35.7
47.5°	814.4	596.4	49.7	26.8	26.4	26.8	27.2	28.0	29.5	29.9	29.5
50°	844.7	591.8	35.7	24.1	24.5	25.6	25.6	26.0	26.0	24.9	24.5
52.5°	866.9	574.7	27.6	20.6	22.9	24.1	24.1	23.3	22.5	21.0	20.6
55°	869.2	536.2	21.8	17.9	20.6	22.5	22.1	20.6	19.0	17.5	17.5
57.5°	839.7	477.9	17.9	15.2	17.9	19.8	19.0	17.5	15.5	14.4	14.4
60°	791.9	418.1	15.2	12.8	14.8	16.7	15.5	14.4	12.4	11.3	11.3
62.5°	703.7	359.0	12.4	10.5	12.0	13.2	12.8	11.7	9.7	8.9	8.5
65°	539.3	273.2	9.3	8.2	9.3	10.9	10.1	8.9	7.8	6.6	6.2
67.5°	324.1	164.4	7.4	6.2	7.4	8.5	7.8	6.6	5.4	4.7	4.7
70°	137.2	70.3	5.8	4.7	5.4	6.6	6.2	5.4	4.3	3.9	3.9
71°	93.3	50.1	5.1	4.3	5.1	6.2	5.8	5.1	4.3	3.9	3.9
72.5°	47.8	25.6	4.3	3.5	4.7	5.4	5.4	4.7	3.9	3.9	3.9
75°	17.1	10.9	3.5	3.1	3.9	3.9	4.3	4.3	4.3	4.3	3.9
77.5°	9.7	6.6	3.1	3.1	3.1	3.5	4.3	4.7	5.1	5.1	4.7
80°	5.4	3.5	1.9	2.3	3.1	3.5	4.3	4.7	5.4	5.4	5.1
82.5°	2.7	1.2	0.4	1.2	1.9	3.1	3.5	3.9	4.7	4.3	4.3
85°	0.4	0.0	0.0	0.4	1.2	1.6	2.3	3.1	3.9	3.9	3.5
87.5°	0.0	0.0	0.0	0.0	0.4	0.8	1.2	1.9	2.7	3.1	2.7
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-SA1A-740-U-T4FT-HSS-ULG

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)