

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-T2-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400966 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-T2-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3842.9 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type II - Medium
BUG Rating: B0 - U5 - G1

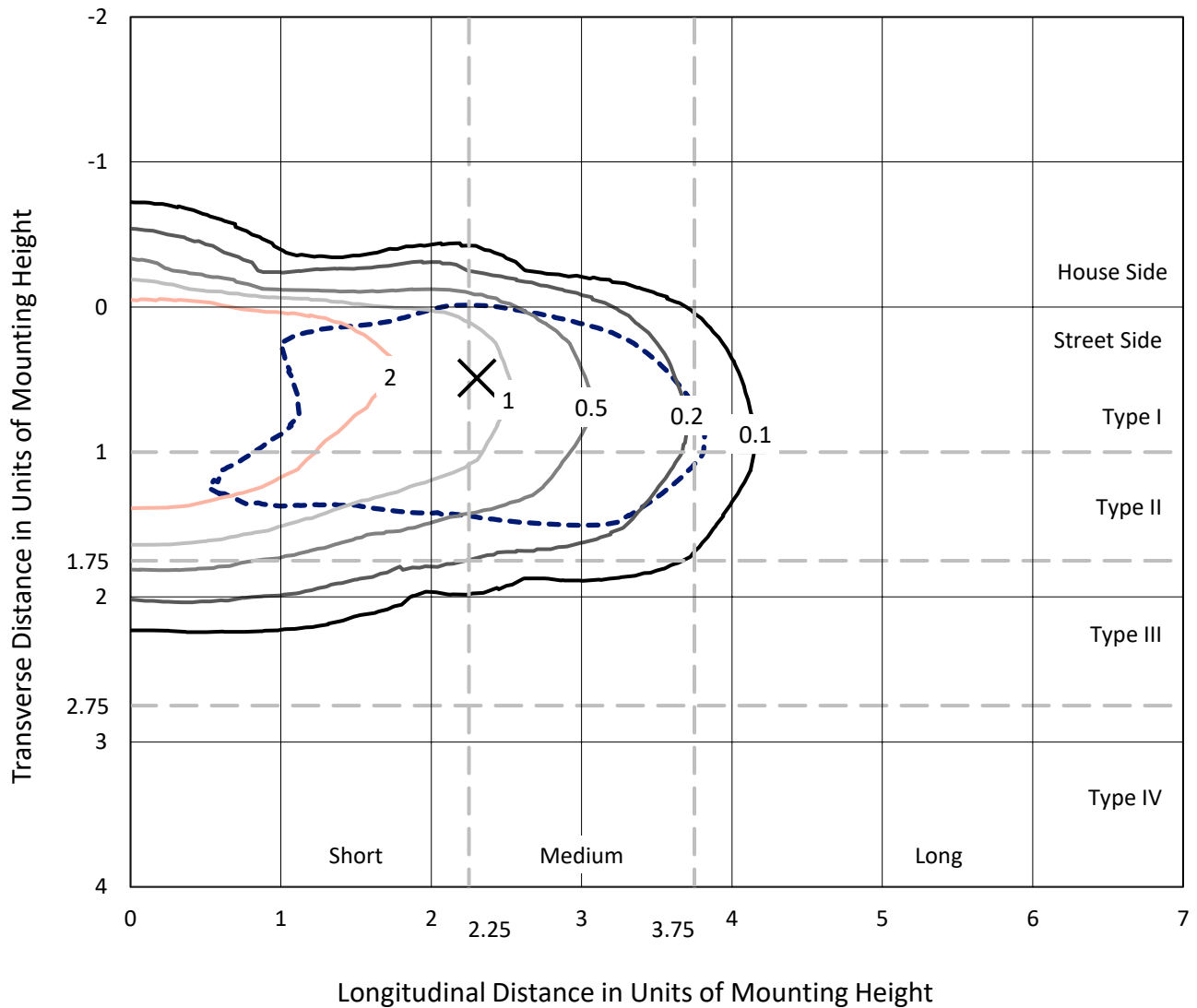
Input Watts (W): 36.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

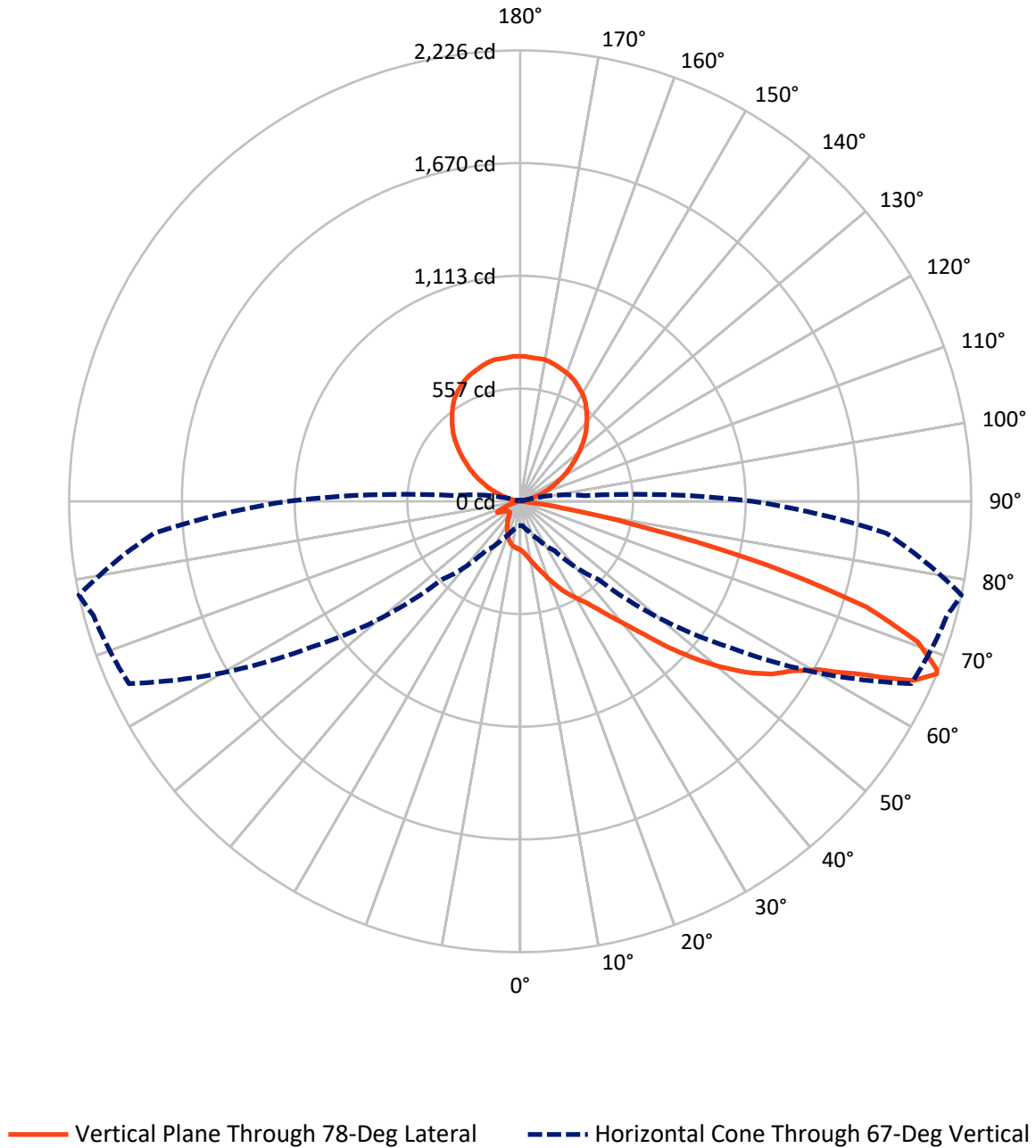
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.8 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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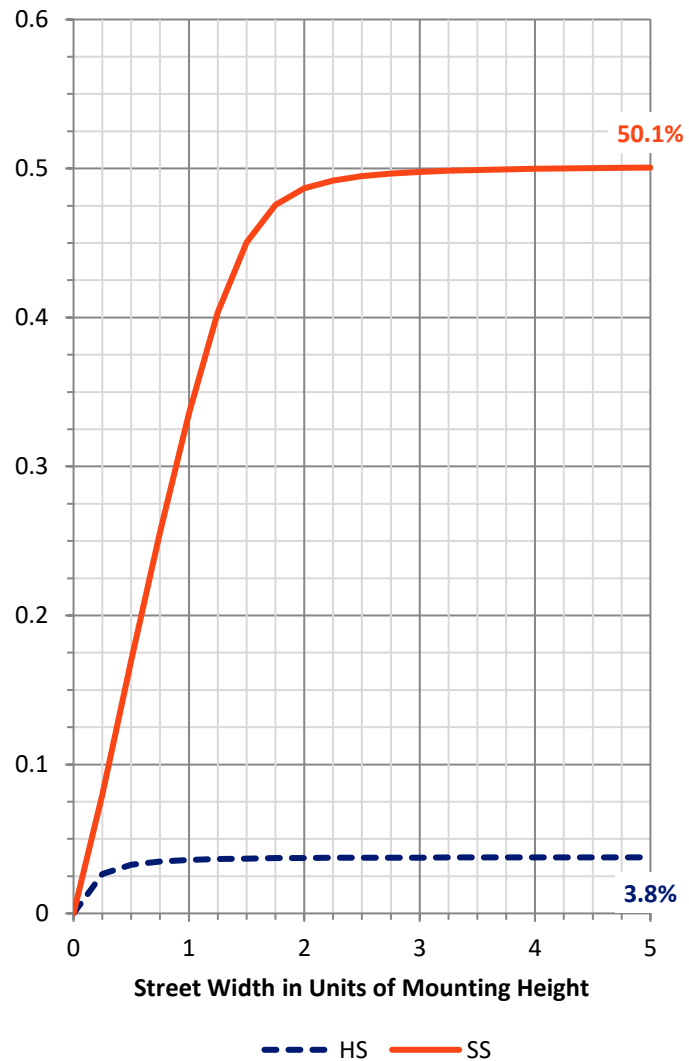
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	146.0	887.0	1032.9
	% Fixture	3.8	23.1	26.9
Street Side	Lumens	1923.0	887.0	2810.0
	% Fixture	50.0	23.1	73.1
Total	Lumens	2069.0	1773.9	3842.9
	% Fixture	53.8	46.2	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.2	0.6
10°-20°	66.3	1.7
20°-30°	117.2	3.0
30°-40°	206.6	5.4
40°-50°	355.1	9.2
50°-60°	534.5	13.9
60°-70°	526.0	13.7
70°-80°	229.9	6.0
80°-90°	10.2	0.3
90°-100°	8.4	0.2
100°-110°	58.7	1.5
110°-120°	169.9	4.4
120°-130°	279.4	7.3
130°-140°	344.6	9.0
140°-150°	352.5	9.2
150°-160°	297.0	7.7
160°-170°	195.5	5.1
170°-180°	67.8	1.8
0°-90°	2069.0	53.8
0°-180°	3842.9	100.0

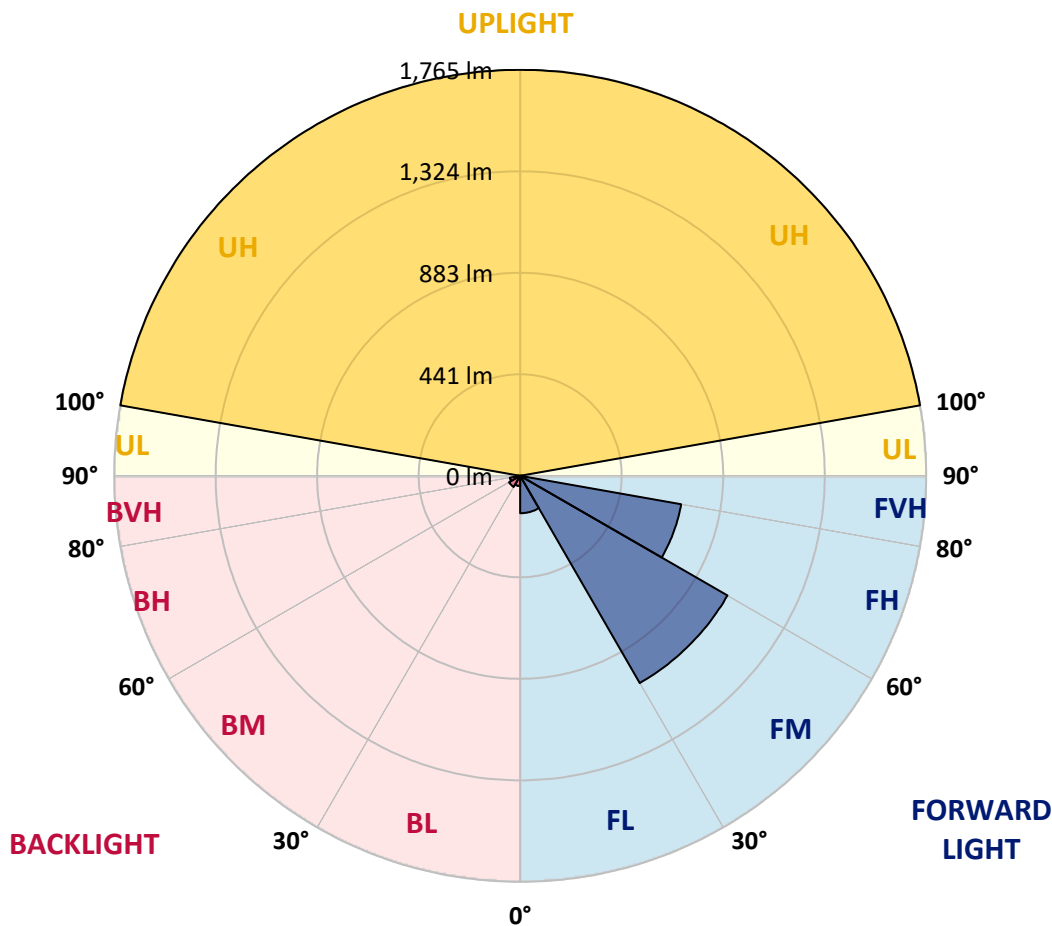


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	162.6	4.2			
FM (30°-60°)	1040.7	27.1			
FH (60°-80°)	710.6	18.5			G1/1800
FVH (80°-90°)	9.1	0.2			G0/10
BL (0°-30°)	44.1	1.1	B0/110		
BM (30°-60°)	55.5	1.4	B0/220		
BH (60°-80°)	45.3	1.2	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	45.9		U5	

BUG Rating: B0-U5-G1
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	240.2	240.2	240.2	240.2	240.2	240.2	240.2	240.2	240.2	240.2	240.2
2.5°	275.6	276.8	275.2	274.0	270.9	267.0	263.2	257.3	251.1	248.8	244.9
5°	309.4	309.4	309.4	306.3	303.6	296.2	287.3	278.3	266.7	262.4	253.4
7.5°	327.3	327.7	328.8	328.8	327.3	322.2	312.5	302.4	284.9	279.1	264.7
10°	329.2	330.8	333.9	338.6	342.1	344.8	339.0	328.1	307.1	300.1	279.1
12.5°	324.2	325.0	330.0	338.6	349.8	361.1	361.5	354.9	331.6	321.9	296.6
15°	312.5	313.7	321.1	334.7	352.2	372.4	384.0	382.1	360.3	349.1	316.0
17.5°	293.9	295.0	304.4	324.6	350.2	379.8	404.6	414.4	388.7	377.8	335.8
20°	293.1	293.5	297.0	312.1	342.5	384.0	424.9	447.8	423.3	411.6	359.2
22.5°	342.8	339.7	332.0	322.2	335.5	382.9	443.1	483.2	466.1	447.8	386.0
25°	398.4	399.6	391.0	368.1	351.4	380.9	457.1	523.2	506.1	487.8	413.6
27.5°	456.7	454.8	447.4	426.4	398.4	394.9	467.2	555.5	544.6	522.4	438.1
30°	513.5	511.9	506.5	485.1	454.8	431.1	475.0	584.6	581.1	556.6	457.9
32.5°	578.4	581.1	574.1	546.1	509.2	480.1	491.7	615.3	625.4	595.5	478.5
35°	653.8	653.8	639.4	613.8	575.7	534.9	525.1	649.1	681.8	649.5	511.2
37.5°	716.0	721.1	712.5	675.6	639.8	597.1	576.1	690.7	751.4	718.7	555.1
40°	765.0	773.5	773.9	737.4	704.3	676.4	647.2	749.4	838.8	796.9	607.6
42.5°	810.5	812.0	818.6	797.6	764.6	757.2	727.3	819.0	948.1	898.7	677.5
45°	868.4	871.5	867.6	852.1	823.7	833.4	816.7	907.2	1070.9	1029.3	759.9
47.5°	953.5	960.9	955.1	927.1	892.5	910.7	898.7	995.1	1209.7	1159.1	849.3
50°	1033.2	1039.0	1045.2	1036.3	1001.7	984.2	969.4	1088.0	1328.6	1285.9	937.2
52.5°	1041.7	1047.2	1081.4	1112.9	1135.8	1089.9	1043.7	1182.1	1438.6	1402.9	1017.6
55°	986.2	989.7	1046.8	1109.0	1214.3	1229.9	1152.9	1275.0	1530.7	1506.3	1071.7
57.5°	831.5	846.2	927.5	1022.7	1194.9	1313.1	1308.0	1383.0	1590.6	1579.3	1141.3
60°	546.1	562.5	659.6	803.9	1051.8	1290.9	1478.3	1545.1	1674.6	1687.0	1263.3
62.5°	283.0	302.0	387.5	515.4	762.3	1124.1	1536.2	1811.4	1835.5	1877.9	1481.0
65°	161.7	165.6	208.3	302.0	471.9	805.0	1466.6	2074.9	2047.3	2133.2	1758.9
67°	120.1	120.1	150.0	205.2	298.9	547.3	1250.9	2130.5	2180.7	2226.1	1814.9
67.5°	107.7	113.5	139.2	189.3	268.2	485.5	1170.4	2115.7	2189.2	2217.6	1795.5
70°	73.9	77.7	99.9	135.7	180.8	252.7	767.3	1871.2	2109.1	2080.4	1627.1
72.5°	44.3	45.9	66.1	97.6	134.9	135.3	418.6	1420.3	1787.3	1786.9	1329.0
75°	27.6	29.2	38.9	65.3	94.5	84.7	193.6	966.3	1283.5	1258.6	890.5
77.5°	15.5	17.9	23.3	35.8	59.9	54.0	81.6	541.5	693.5	650.7	442.4
80°	6.2	7.4	13.2	17.1	33.8	32.3	33.4	190.5	280.6	253.1	148.1
82.5°	1.6	1.9	4.7	8.2	13.2	13.2	10.5	52.1	66.5	61.8	38.1
85°	0.0	0.0	0.4	0.4	0.4	0.8	2.7	5.8	7.0	8.2	6.2
87.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.8	1.2	1.2	1.2	1.2
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	7.2	7.2	6.1	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	8.2	7.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	10.2	9.2	8.9	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	26.6	23.5	22.3	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	48.1	43.0	42.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	71.6	66.5	65.3	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.2	92.1	91.1	89.0



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CATALOG NUMBER: ENT-SA1A-740-U-T2-HSS-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.8	121.7	120.8	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	153.4	152.4	151.8	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	186.2	183.1	182.5	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	219.9	214.8	214.2	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	255.7	250.6	250.0	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	289.5	284.4	283.8	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	322.2	317.1	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.9	353.9	353.6	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	389.7	389.7	389.1	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	425.5	423.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	458.3	457.3	458.2	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	485.9	486.9	488.5	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	513.5	515.6	517.1	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	545.2	545.2	545.5	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	574.9	573.9	573.0	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	598.4	599.4	598.5	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	617.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	628.1	632.2	633.7	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	645.5	650.6	651.2	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	662.9	664.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	679.2	676.2	675.9	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	686.4	685.4	684.8	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	692.5	695.6	695.0	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	699.7	703.8	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	704.8	709.9	710.5	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	707.9	709.9	710.5	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	711.0	712.0	711.4	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	715.0	717.1	716.2	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°	240.2	240.2	240.2	240.2	240.2	240.2	240.2	240.2	240.2	240.2	240.2
2.5°	241.8	239.1	233.6	227.8	222.0	217.3	213.4	208.0	207.2	207.2	207.2
5°	246.8	240.6	228.2	215.7	203.3	192.0	183.9	177.3	171.4	169.5	171.0
7.5°	254.2	242.9	221.2	199.4	180.0	164.0	152.4	143.0	138.8	136.4	134.5
10°	263.9	246.4	211.8	180.0	155.5	136.4	124.0	115.1	110.8	108.1	108.5
12.5°	274.4	249.2	200.2	159.0	131.8	114.3	103.8	96.4	89.4	85.1	86.3
15°	284.9	251.1	185.8	139.5	113.5	98.0	83.2	70.0	65.3	64.5	64.1
17.5°	296.6	250.7	169.9	121.3	98.0	76.2	61.4	59.9	59.5	59.5	59.1
20°	308.6	248.8	151.6	106.1	82.4	57.9	55.6	54.8	53.6	53.3	52.9
22.5°	321.9	245.3	134.9	92.9	61.4	52.9	49.8	47.4	45.5	44.3	44.7
25°	333.9	238.7	118.6	80.5	52.5	47.4	43.1	39.6	37.7	36.2	36.5
27.5°	342.1	227.0	104.6	64.9	48.2	42.0	36.9	33.4	30.7	29.5	29.5
30°	342.8	210.3	92.1	53.3	43.9	36.9	31.5	27.6	26.0	25.3	24.9
32.5°	342.1	193.2	82.8	49.0	40.0	32.3	26.8	24.1	22.5	21.8	21.8
35°	346.0	175.7	74.2	45.1	35.8	28.4	23.7	21.0	19.8	19.0	19.0
37.5°	357.6	163.6	65.3	41.2	31.9	24.9	21.4	19.0	17.9	17.1	17.1
40°	373.6	153.5	54.4	37.3	28.0	22.5	19.4	17.5	15.9	15.2	15.2
42.5°	401.5	149.7	45.5	33.4	24.5	20.2	17.9	15.5	14.0	13.2	13.2
45°	443.1	151.6	41.6	29.9	22.2	18.3	15.9	13.6	12.1	11.7	11.7
47.5°	489.0	159.8	38.9	26.8	20.2	17.1	14.4	12.1	10.5	10.1	10.1
50°	540.3	172.6	36.5	23.7	18.3	15.5	12.8	10.5	9.3	8.9	8.9
52.5°	589.3	188.9	34.2	21.4	17.1	14.0	11.3	9.3	8.6	8.2	8.2
55°	626.6	199.4	32.3	19.8	15.9	12.8	10.1	8.9	7.8	7.4	7.4
57.5°	678.7	216.9	29.9	17.9	14.4	11.7	9.3	8.2	7.0	7.0	7.0
60°	784.4	263.9	26.4	16.3	12.8	10.5	8.9	7.4	6.6	6.2	6.2
62.5°	974.9	341.7	22.9	15.2	11.3	9.3	7.8	6.6	5.8	5.1	5.1
65°	1158.4	373.9	19.4	13.2	10.1	8.2	7.0	5.8	4.3	3.5	3.5
67°	1148.2	319.9	16.3	11.3	8.6	7.4	5.8	4.7	3.1	1.9	1.9
67.5°	1121.0	297.8	15.9	10.9	8.2	7.0	5.8	4.3	2.7	1.6	1.6
70°	952.7	208.3	12.4	8.6	7.0	6.2	4.7	3.1	1.6	0.8	0.8
72.5°	773.9	165.2	9.7	7.0	5.8	4.7	3.9	1.9	1.2	0.4	0.4
75°	547.3	101.5	8.6	6.2	4.7	3.5	3.1	1.9	1.2	0.8	0.4
77.5°	270.2	46.6	7.0	5.4	4.3	3.5	2.7	2.3	1.9	1.6	0.8
80°	79.3	15.2	4.7	3.9	3.9	3.5	3.1	2.7	2.3	1.9	1.2
82.5°	17.9	5.4	1.6	1.9	2.7	2.7	2.7	1.9	1.6	0.8	0.4
85°	2.3	1.2	1.2	1.2	1.6	1.6	1.2	0.8	0.8	0.0	0.0
87.5°	0.8	0.8	0.8	1.2	1.2	1.2	0.8	0.4	0.4	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°	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-T2-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)